

OCTOBER 4, 1954

Quebec, North Shore & Labrador . . . p. 44

RAILWAY AGE

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How It Was Built

What Is Its Future?

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- 4 Handles car trucks
- 5 Plows snow in yards and on the main line
- 6 Grades shoulders
- 7 Loads and unloads cinders, salt, amacrete
- 8 Digs pole holes
- 9 Ditches



WAY PAGE

WHEN the Waterloo, Cedar Falls and Northern Railway, Waterloo, Iowa, bought a Caterpillar D6 Tractor with a Hystaway, it knew it had one unit that had to do a lot of important jobs.

The road quickly found it had *five* units—crane, dragline, clamshell, wingdozer and bulldozer—capable of at least the nine vital jobs listed above.

And, in addition, this versatile piece of equipment works on or off track with its track-walking shoes. These shoes are designed not to injure rails and bond wires.

"We can just get on the track and go—any time it is necessary," says Nathan B. Barber of the W. C. F. & N. "It's a real versatile machine. It helps take care of 130 miles of track."

Here, then, is a real hedge against rising costs. It can do many jobs—and do them well. It operates on

inexpensive equipment, it will be on the job when you want it.

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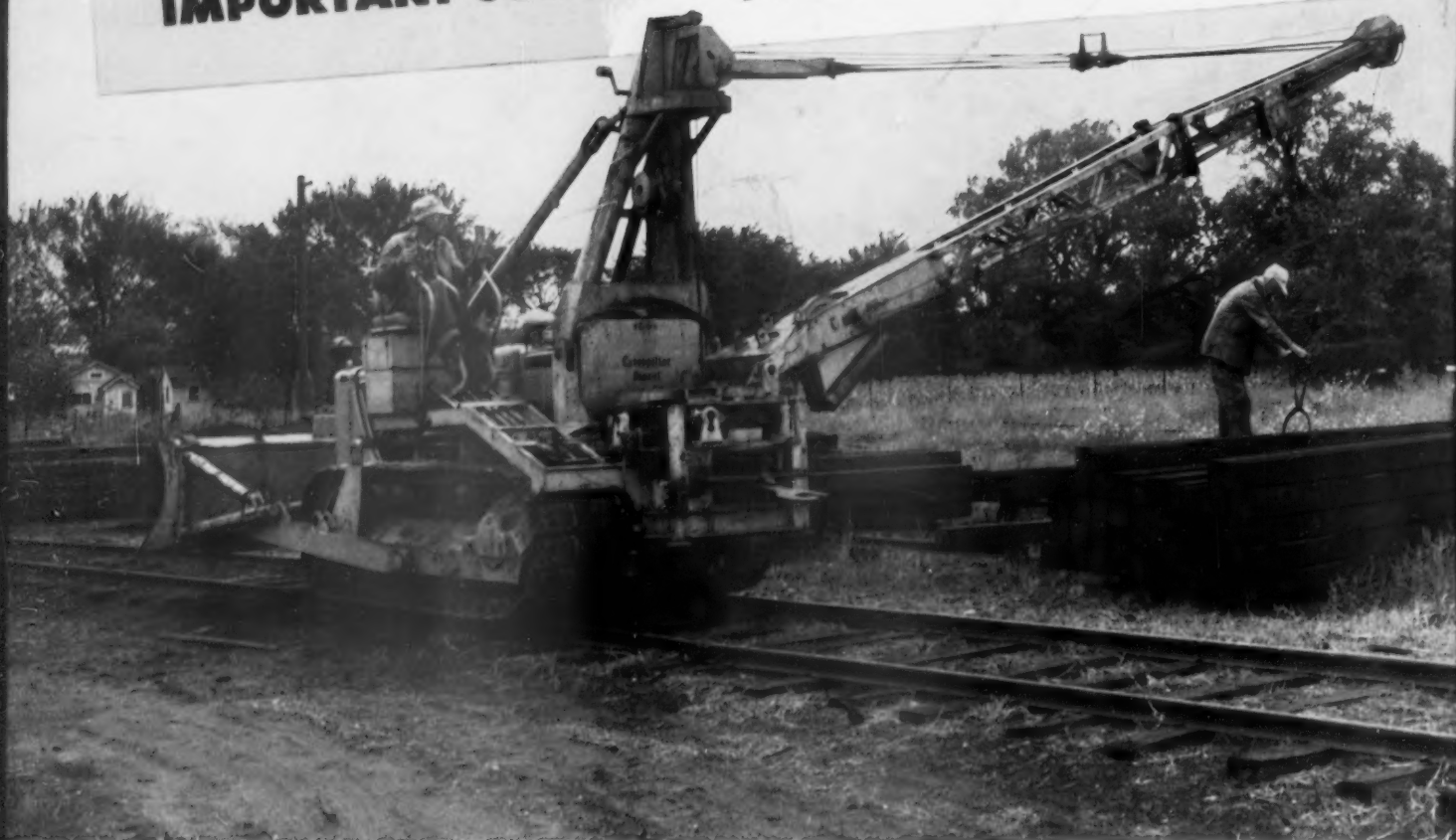
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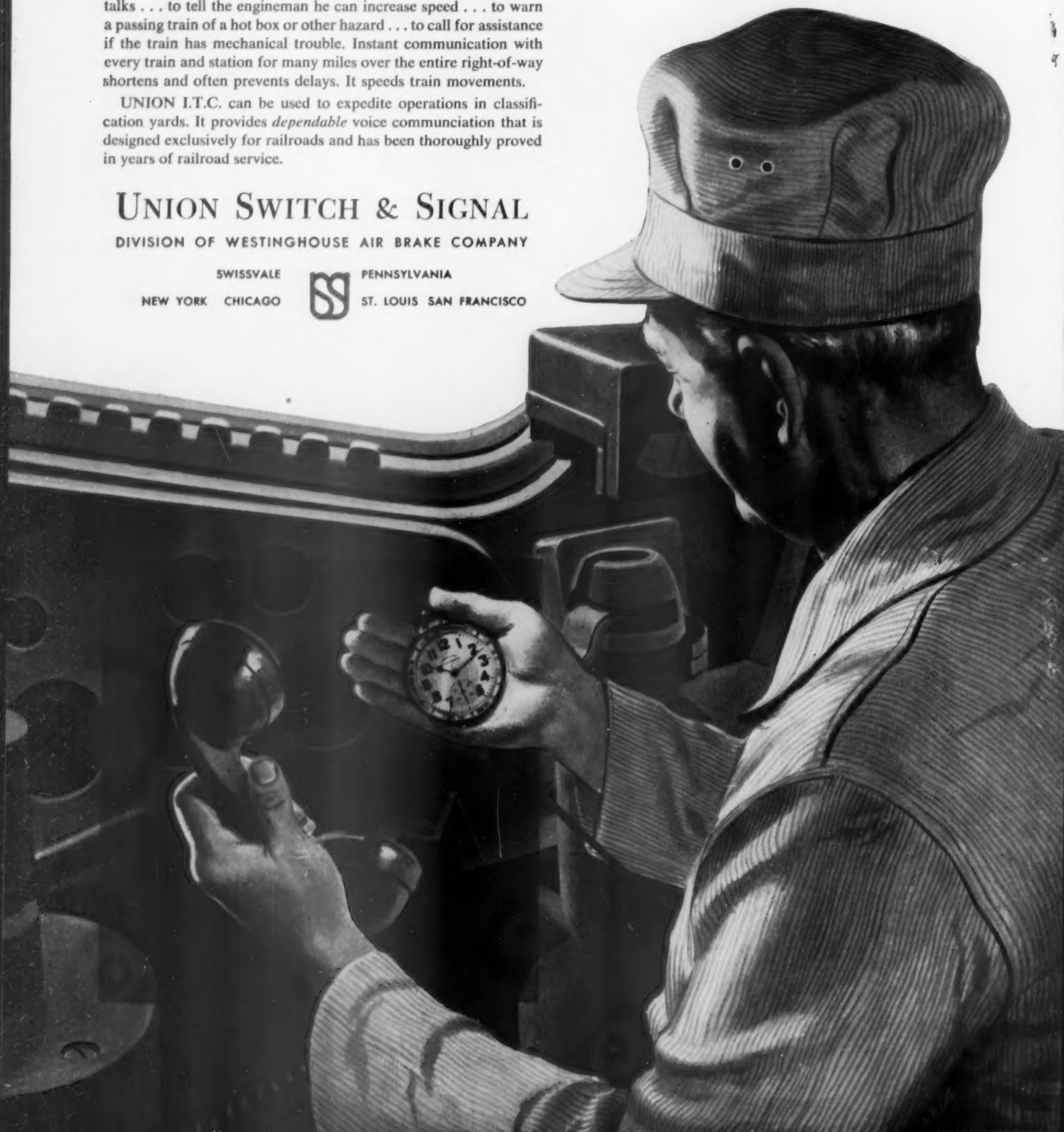
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October 4, 1954

Vol. 137, No. 14

Week at a Glance

Railroad "reserve capacity" is not keeping pace with
the growth of the national economy. That, says U. S.
Steel's Grosvenor Plowman, is something for the na-
tional defense agencies to think seriously about. 8

Capital expenditures by railroads in 1954, latest esti-
mates indicate, will be about \$806 million—a decline
of 36% from the 1953 figure. 9

William White last week was elected president of the
Delaware & Hudson, succeeding Joseph H. Nuelle, who
was named chairman of the board. 10

Three-cent air mail will be "tested" another year, the
CAB has decreed. Meanwhile, a "final" air-mail rate
investigation is getting under way. 12

Interstate Commerce Commissioner Mahaffie's tenure
after December, when he becomes 70 years of age, is
now uncertain. Railroad men generally hope he will be
left on the job, because they feel that his background
and judicial approach have blended to endow him with
the "ideal" disposition for a regulator. 12

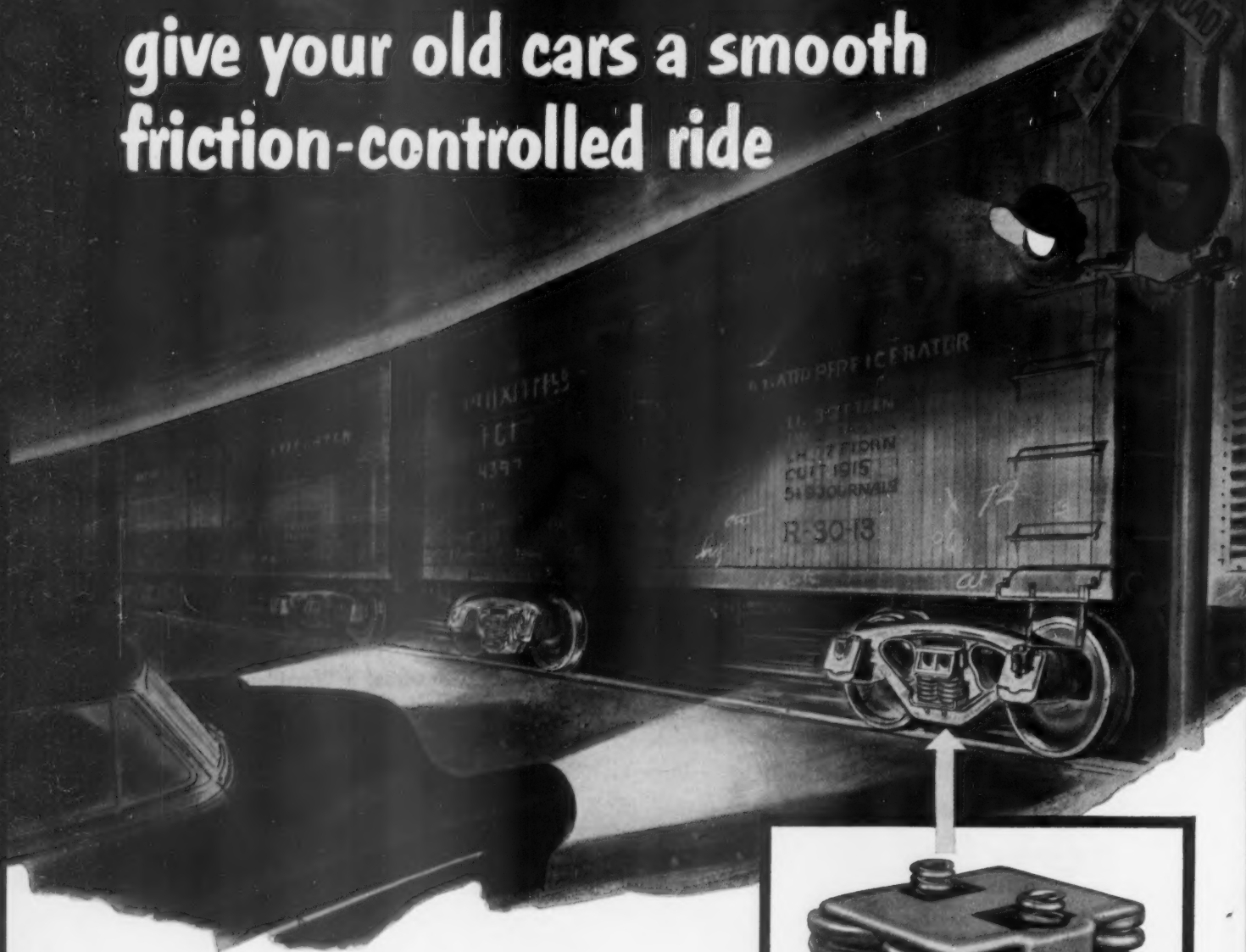
FORUM—Cold wars prevail in the domestic economy as
well as in international affairs, and the railroads are in
the middle of one now. Survival is the issue. There are
practical measures industry leadership can take to bet-
ter assure survival until Socialism's popularity wanes.
43

A SPECIAL REPORT on the Quebec, North Shore &
Labrador—in which two *Railway Age* editors tell why
the world's newest heavy-duty railroad was needed,
how it was built, and how it is operated. 44

The Why and the Wherefore 45
A Railroad Is Built 46
A Railroad Is Equipped 50

NATIONAL SNUBBER PACKAGES

give your old cars a smooth
friction-controlled ride

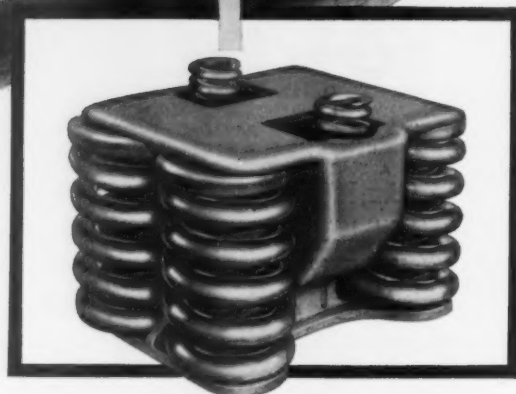


Now you can equip your old freight cars with National Snubber Packages that operate on the same friction-control principle (with the same extra-large friction surfaces to reduce wear) as the National C-1 truck. The riding qualities of this outstanding car truck can now be obtained in the National Snubber Package.

This Snubber Package fits between most narrow side-frame columns, and can be applied to approximately 90 percent of old non-friction-control trucks in service.

For more and satisfied shippers use National Snubber Packages!

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Current Statistics

Operating revenues, seven months	
1954	\$ 5,389,093,368
1953	6,253,221,966
Operating expenses, seven months	
1954	\$ 4,316,285,150
1953	4,724,355,127
Taxes, seven months	
1954	\$ 509,494,449
1953	749,901,499
Net railway operating income, seven months	
1954	\$ 416,325,817
1953	643,223,357
Net income, estimated, seven months	
1954	\$ 272,000,000
1953	490,000,000
Average price railroad stocks	
September 28, 1954	70.49
September 29, 1953	58.21
Carloadings, revenue freight	
Thirty-eight weeks, 1954	24,320,957
Thirty-eight weeks, 1953	28,246,721
Average daily freight car surplus	
Week ended Sept. 25, 1954	65,719
Week ended Sept. 26, 1953	8,383
Average daily freight car shortage	
Week ended Sept. 25, 1954	1,467
Week ended Sept. 26, 1953	3,769
Freight cars on order	
September 1, 1954	13,013
September 1, 1953	45,735

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Departments

Abandonments	69
Advisory Board	63
Benchmarks & Yardsticks	63
Competitive Transport	11
Current Publications	78
Equipment & Supplies	69
Figures of the Week	9
Financial	63
Forum	43
Labor & Wages	12
Law & Regulation	10
Letters from Readers	32
New Facilities	13
Operations	8
Organizations	12
People in the News	12
Railway Officers	71
Rates & Fares	12
Securities	16
Supply Trade	70
Traffic	7
Traffic Research	69
What's New in Products	37

Week at a Glance CONTINUED

SPECIAL REPORT—The QNS&L

What It Will Haul—and How	52
Maintenance Policies	60
Who's Behind It	62
What About the Future?	62

BRIEFS

New York Central's piggyback operation contemplating special terminal facilities, with flat cars to be leased from Rail Trailer Company, and originally scheduled to start this fall, has been "held in abeyance" for further study.

IC Commissioner Clarke, who is also director of DTA, hopes the railroads and refrigerator car lines will increase their ownership of reefers "to the greatest possible extent." At the same time he is advising shippers of perishables that they should give the railroads "reasonable assurance" that traffic will be available to warrant making the large capital expenditures involved.

Alleghany Corporation, contending before the ICC that its New York Central holdings justify continuing its status as a carrier, for purpose of regulation, is opposed by the Securities & Exchange Commission, which would like to assume jurisdiction again over Alleghany's financial transactions. The SEC claims that Alleghany's rail holdings now account for only 16% of its assets.

Canadian "Crow's Nest Pass rates," politically dictated low tariffs for grain and grain products moving by rail, may have some of their sting removed. At least the federal government is said to plan a proposal to the next Parliament for subsidies to the Canadian railroads to help offset the effects of the artificially reduced rates.

Different termination dates for daylight time are giving several railroads some scheduling headaches. Especially hard hit are the New Haven and the Boston & Maine, as some New England states are keeping "summer time" in effect a month longer than others.

EASIEST

TO INSTALL AND MAINTAIN



Hyatt Roller Bearing Journal Boxes are ready to install just as they come from the factory. After box is slipped into place, locking cup is bolted to axle-end, grease is added to the fitting, and box is ready to roll.

Roller bearing journal boxes will put an end to your freight car hot box problem. But only Hyatt boxes will give you maximum savings on installation and maintenance.

Installation of Hyatt straight-roller boxes is a one-man job. It takes only a few minutes. No special tools are required and bearing adjustments are not necessary! The box is simply slipped onto the axle—over the one-piece inner race, locked into position, and lubricated. That's all.

Disassembly, naturally, is equally simple. Press fits are not disturbed when removing either a box or a wheel, and because spare axles and wheels need to be fitted with inner races only, your investment in spare parts is substantially reduced.

Write for our new Maintenance Manual. It will give you complete information on the amazingly simple assembly and maintenance procedure for Hyatt Journal Boxes.

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**ROLLER BEARING
JOURNAL BOXES**

Equitable Bets on Railroads

Investment of hundreds of millions based on respect for tremendous job done to modernize this indispensable industry

"Over a period of years we have acquired the greatest possible respect for the tremendous job done by railroad managements in modernizing and mechanizing their properties at high cost, the money coming almost entirely from earnings," Hunter Holding, second vice-president, Equitable Life Assurance Society, said in Louisville, Ky., September 28.

Addressing the annual meeting of the Associated Traffic Clubs of America, Mr. Holding added that because of Equitable's "great faith" in the future of railroads, the company, over the past 15 years, has become the largest single railroad investor. "This was done during and since the late 1930's," he continued, "when the pessimists in the industry were scaring many institutions away from railroad securities."

Not Luck—Equitable "didn't become the largest investor in an off-hand manner, nor was it a matter of luck," Mr. Holding went on. "We did it after making a complete study of the industry and its problems and after deciding that the railroads of the country were the cheapest and most efficient mass producers of trans-

portation for all kinds of commodities and were indispensable to the nation. Within only five years (1937-42) we increased our railroad investment \$300,000,000 at a time when big blocks of rail bonds were practically being thrown at us at bargain prices."

Mr. Holding, discussing acquisition of new rolling stock, which he described as a major railroad problem, said that since March 1950, when Equitable announced its lease-purchase plan, the company has financed under it 20,517 freight cars and 309 diesel units, costing a total of about \$162,000,000.

Piggyback—Eugene F. Ryan, president of the Rail-Trailer Company, presented the meeting with arguments to support the piggyback plan advanced by his firm: Railroad hauling of trailers of motor common carriers.

Leading off with a blast at a *Railway Age* editorial of September 20, on how best to avoid government ownership of railroads, Mr. Ryan suggested it was "going to extremes to hold out the prospect of dire disaster." Emphazizing that the competitive struggle between railroads has gone too far, he criticized, by implication,

the railroad reduction of rates on steel and a recent proposal in Ohio to cut coal rates. Mr. Ryan said that, if applied on a national basis, the latter proposal would cost railroads over \$100,000,000.

New Officers—The following new officers of the ATCA were elected: President, L. A. Pomeroy, Jr., traffic manager, National Malleable & Steel Castings Co.; executive vice-president, Frank O'Neill, general traffic manager, Minnesota Mining & Manufacturing Co.; secretary, Raymond DeGroote, general western freight agent, Luckenbach Steamship Corporation; treasurer, R. P. Yellen, general agent, Norfolk & Western; vice-president—education & research, G. Lloyd Wilson, professor of transportation and public utilities, University of Pennsylvania.

4th Quarter Loadings Seen Down 8.6%

A reduction of 8.6% in freight car loadings in the fourth quarter this year, compared with the same period in 1953, has been predicted by the 13 regional Shippers Advisory Boards.

On the basis of the estimate, loadings of the 32 principal commodities will be 6,519,232 cars in the fourth quarter of 1954, compared with 7,132,329 actual carloadings in the corresponding quarter last year.

Twelve of the boards estimated re-



DELAWARE & HUDSON OFFICERS attended a recent two-hour briefing on diesel locomotive operation and maintenance at Colonie, N. Y., in the American Locomotive Company's traveling diesel instruction car. Although technical courses have been presented to over 40,000 railroaders on 40 railroads in the U. S., Canada and Mexico since the "school on wheels" was placed in

service in May 1951, this was said to be the first time a group of key executives from any railroad has attended such a class. Among D&H officers present were G. D. Hughey, vice-president and general manager; W. L. Lentz, superintendent of equipment; R. D. Cummings, purchasing agent; A. N. Gambichler, master mechanic; R. H. Ely, general auditor; and A. C. Allen, general diesel supervisor.

SHIPPERS ADVISORY BOARDS	ESTIMATED LOADINGS FOURTH QUARTER 1954	ACTUAL LOADINGS FOURTH QUARTER 1953	PER CENT DECREASE
New England	107,270	107,413	0.13
Atlantic States	663,729	718,240	7.6
Allegheny	725,380	838,436	13.5
Ohio Valley	759,129	866,178	12.4
Southeast	908,352	924,375	1.7
Great Lakes	443,365	510,822	13.2
Central Western	269,353	283,776	6.1
Mid-West	797,207	842,743	5.4
Northwest	371,969	544,140	31.6
Trans-Missouri-Kansas	351,125	363,255	3.3
Southwest	493,752	503,718	1.97
Pacific Coast	358,531	382,171	6.2
Pacific Northwest	270,070	247,062	9.3 Inc.
TOTAL	6,519,232	7,132,329	8.6

ductions. The Pacific Northwest board was the only one to estimate an increase.

The accompanying tabulation shows

estimated loadings for the 1954 fourth quarter and actual loadings in the fourth quarter of 1953, and the percentage of change.

Operations

RR Emergency Role Declines

E. G. Plowman says slow relative growth of RRs, plus measures taken to meet competition, have cut their former ability to expand

Our railroads will not provide, in any future emergency period, as large a proportion of wartime domestic transportation as they provided in World Wars I and II, E. G. Plowman, vice-president and general traffic manager, U.S. Steel Corporation, said in New York September 16.

Mr. Plowman, addressing a luncheon of the Transportation Section of the New York Board of Trade, said that, since World War II, development of other types and modes of transportation "has far outpaced our slower growing railroad common carriers." The ability of U.S. railroads to accomplish the "transportation miracle" of the two World Wars, he added, derived from the reserve capacity of the railroad industry.

"It is this reserve capacity," Mr. Plowman went on, "that is being reduced by the decline in size of our railroads as compared to the growth of the United States. At the same time other forms of transportation have experienced rapid expansion."

Effect of Competition—In addition to the factor of relatively slow growth, the speaker contended, measures taken by railroads to remain competitive have reduced, to some extent, their former ability to expand their operations. As an example he cited the trend toward a smaller fleet of freight and passenger cars, operated over a reduced number of miles of track, with fewer locomotives, and under more efficient conditions. "In any future war emergency, this reduction in equipment, motive power and track will have to be accepted as a factor lessening to some degree railroad flexibility."

Mr. Plowman said some of the loss

in excess capacity of railroads, plus their slight loss of flexibility, can be met in any future military emergency by other forms of domestic transportation. The effect of the slow decline in relative importance of our railroads, he emphasized, "is not for me to evaluate. It is a proper subject for study by our government agencies, both civilian and military. Perhaps our government will decide that, in the interest of national defense, the present level of our reservoir of excess railroad capacity should be maintained. Government may decide that this reservoir should be increased in various ways, for example, by signal improvement, freight and passenger car construction, or construction of modern hump yards, and that the government should encourage and assist railroads to do it."

NSSTC Plans 90-Day Test of LCL Traffic

Meeting in Chicago, September 22-24, the National Small Shipments Traffic Conference moved to put in motion a 90-day test to solve the old "Chicken-and-egg" problem of which comes first—more regular merchandise cars or more LCL tonnage. Railroads operating package cars will be asked to cooperate in this study, which is under direction of Harry F. Gillis, executive vice-president of the NSSTC, and H. A. Rice, assistant traffic manager of the J. C. Penney Company.

Conference officers will write appropriate railroad presidents and merchandise managers for a list of merchandise cars now operated from Chicago, St. Louis, Cleveland, Detroit,

Toledo, Indianapolis, Louisville, Buffalo, Pittsburgh, Columbus, and Cincinnati.

They will ask that railroads continue to operate those cars as scheduled for 90 days, regardless of tonnage; to unload and deliver promptly; to give the merchandise service all possible support through advertising and solicitation of traffic; and to furnish to the Washington office of the NSSTC a periodic performance record of each car. Railroads that cooperate will have full support of the conference.

Performance records will be used as a guide in working out a suggested routing plan for LCL shipments—similar to the Louisville Shippers Plan—which would extend over the whole country. This plan was proposed and discussed at a special meeting last April.

The September meeting also adopted a resolution approving reduced rates on volume LCL shipments of 5,000 lb or more. The resolution stated that the reduced rates would attract more LCL traffic, thus permitting heavier loads for regular scheduled merchandise cars, so they could be handled "more profitably for the carriers and more expeditiously for the public."

J. A. Winzenried, general traffic manager, Devoe & Reynolds Co., Louisville, was elected as first president of the NSSTC at the Chicago meeting. George O. Griffith, director of traffic, American Home Products Corporation, New York steps down as chairman, formerly the chief officer of the conference.

Other newly elected officers are: Vice-president, Walter K. Cabot, traffic manager, Johnson & Johnson, New Brunswick, N. J.; treasurer, Spencer Hughes, traffic manager, McClellan Stores, New York; and secretary, Frank Cohen, traffic manager, Coast-to-Coast Stores, Minneapolis.

IC WINS UNUSUAL SUIT FOR DAMAGES

The Illinois Central won an unusual suit and was awarded \$124,300 in damages—virtually all it sought—by a McCracken County (Ky.) circuit court jury. The case directly reversed the traditional situation in which a motorist strikes an overpass abutment and sues the railroad for placing an obstruction in his way.

In this case a bulldozer, being carried on a flatbed highway trailer, struck the abutment of an IC bridge near Childs, Ky. The force of the blow threw the tracks out of line and resulted in subsequent derailment of 23 cars in a freight train. Defendants were the driver of the truck and the owner, S. G. Oberling, Evansville, Ind.

The jury award—highest ever granted by that court—followed nearly three years of litigation.



TV SHOWS that ice bunker door is open on car that is 2,000 ft away.

TV in SP Yard

Use of industrial television as "extra eyes," to aid in watching freight car movements and general switching operations over a large area, is the aim of TV tests now being conducted by the Southern Pacific in one of its yards at Los Angeles. The experimental TV setup includes two cameras—one wide lens and one telescopic lens mounted on a special structure atop the general yardmaster's large-windowed tower, 60 ft above track level—and also one TV viewer installed at the desk of the terminal superintendent.

Over the TV viewer the terminal superintendent or general yardmaster gets a wide picture of yard activities in a 40-track area where freight trains are made up. Pressing a button brings in a picture from the telescopic lens, giving him a closeup of yard operations 2,000 ft away. He can see obstructions, or defects on cars, and spot safety violations or vandalism. Five or six cameras are proposed in a permanent installation which could cover a two-mile long railroad yard from every angle. Cameras housed in all-weather boxes fitted with automatic temperature controls and windshield wipers would be remotely controlled, from a panel beside the 10-in. viewer, to swing from side to side or focus on chosen areas.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended September 25 totaled 710,215 cars, the Association of American Railroads announced on September 30.

ACTUAL AND ESTIMATED GROSS CAPITAL EXPENDITURES OF CLASS I LINE-HAUL RAILROADS—1953 AND 1954

Period	Number of roads	Road Thousands	Equipment Thousands	Total Thousands
Actual 1953:				
1st half	130	\$179,905	\$464,026	\$ 643,931
2nd half	130	221,996	393,867	615,863
Year	130	401,901	857,893	1,259,794
Actual 1954:				
1st half	130	154,308	321,083	475,391
Estimated 1954:				
3rd quarter	126	88,322	101,155	189,477
4th quarter	126	76,832	64,428	141,260
2nd half	126	165,154	165,583	330,737
Total: 1954 actual and estimated		319,462	486,666	806,128
Percent of change:				
1st half 1954 vs. 1st half 1953 ..		- 14.2	- 30.8	- 26.2
2nd half 1954 (Est.) vs. ..				
2nd half 1953 ..		- 25.6	- 58.0	- 46.3
Year 1954 (actual and estimated) vs. 1953 ..		- 20.5	- 43.3	- 36.0

—From the September 14, 1954, "Monthly Comment," published by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.

This was a decrease of 1,013 cars, or 0.1 per cent, compared with the previous week; a decrease of 109,494 cars, or 13.4 per cent, compared with the corresponding week last year; and a decrease of 151,850 cars, or 17.6 per cent, compared with the equivalent 1952 week.

Loadings of revenue freight for the week ended September 18 totaled 711,228 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, September 18			
District	1954	1953	1952
Eastern	111,052	138,887	143,161
Allegheny	123,921	159,749	172,544
Poconchos	51,065	59,250	67,876
Southern	123,118	130,067	135,753
Northwestern	117,427	141,602	152,625
Central Western	125,142	130,602	136,443
Southwestern	59,503	63,726	65,194
Total Western Districts	302,072	335,930	354,262
Total All Roads	711,228	823,883	873,596
Commodities:			
Grain and grain products	51,383	51,876	47,621
Livestock	13,261	11,952	12,963
Coal	118,517	138,836	171,365
Coke	7,181	12,528	14,687
Forest products	43,134	46,390	46,113
Ore	61,566	89,899	98,690
Merchandise incl.	63,866	70,270	74,852
Miscellaneous	352,320	402,132	407,305
September 18 ..	711,228	823,883	873,596
September 11 ..	601,525	710,554	881,291
September 4 ..	688,492	799,080	746,882
August 28	676,616	818,461	727,360
August 21	678,624	817,446	834,229
Cumulative total ..			
38 weeks	24,320,957	28,246,721	27,155,831

In Canada.—Carloadings for the

seven-day period ended September 14 totaled 79,884 cars, compared with 64,770 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Con-nections
Totals for Canada:		
September 14, 1954	79,884	23,506
September 14, 1953	63,806	31,998
Cumulative Totals:		
September 14, 1954	2,538,316	2,800,305
September 14, 1953	1,002,920	1,162,370

Gross Still Fails to Keep Pace with National Income

Railroad operating revenues failed again in 1953 to keep pace with national income. They amounted to 3.54 cents per dollar of national income as compared with 3.68 cents in 1952.

These and like figures back through 1939 were presented by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics in its latest "Monthly Comment."

The 1939 figure was 5.57 cents while 1942's was 5.48 cents, the latter reflecting a brief comeback from 1941's 5.17 cents. The figures since 1942 (with the exception of 1947's) reflect what the bureau called "an uninterrupted and marked downward trend."

Last year's figure for ton-miles of revenue freight per capita was also down—3.815 as compared with 1952's

UNIT COST OF FUEL PURCHASED—CLASS I ROADS

INDEX 1946=100							
Coal f.o.b. mines		Fuel oil		Diesel fuel		Electric current*	
Cost per net ton	Index	Cost per barrel	Index	Cost per gallon	Index	Cost per k.w. hour	Index
June 1946	\$3.22 100.0	\$1.22 100.0		5.25¢ 100.0		0.884¢ 100.0	
1947	3.40 105.6	1.65 135.2		7.21 137.3		0.975 110.3	
1948	4.34 134.8	2.39 195.9		10.05 191.4		1.142 129.2	
1949	4.34 134.8	1.34 109.8		8.59 163.6		1.191 134.7	
1950	4.43 137.6	1.51 123.8		8.66 165.0		1.061 120.0	
1951	4.61 143.2	1.83 150.0		9.42 179.4		1.032 116.7	
1952	4.56 141.6	1.63 133.6		9.28 176.8		1.070 121.0	
1953	4.78 148.4	1.61 132.0		9.44 179.8		1.109 125.5	
1954	4.44 137.9	1.75 143.4		9.52 181.3		1.183 133.8	

* Used for yard and train power.

—From the September 14, 1954, issue of "Monthly Comment," published by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.

3,935. The 1953 figure was 49% above 1939's 2,560 but 28.9% below wartime 1944's 5,363.

Law & Regulation

ICC Bureau Says Transit Should Get Better Policing

The Interstate Commerce Commission's Bureau of Inquiry and Compliance has found indications that the railroads' present methods of transit policing "leave something to be desired."

The indications were turned up in a "preliminary survey" made by the ICC bureau. It covered operations of three railroad weighing and inspection bureaus—Southern, Eastern, and Western. ICC Secretary Laird transmitted a portion of the survey report to carriers, suggesting that they would be "interested," since "the commission and the courts have held that the responsibility for policing transit arrangements rests with the carriers."

The report said that there had recently come to the attention of the ICC bureau two instances in which the policing of transit arrangements "failed to prevent unauthorized manipulation of billing and substitution of commodities." Prosecution has been recommended in one of those cases while

the other is still under consideration, the report added. It went on to make this further comment:

"These situations . . . indicate that the present methods of transit policing leave something to be desired. Probably some of the difficulty with transit is traceable to ambiguous language of the transit tariffs but, nevertheless, and this is also the consensus of several of our special agents, there are not enough railroad and inspection bureau employees assigned to police adequately transit arrangements or privileges authorized by the carriers' tariffs. Further, the transit inspectors or other transit policing employees have numerous additional duties which impede, delay, or prevent proper and effective policing of transit privileges."

WILLIAM WHITE ELECTED D&H PRESIDENT—STILL FAVORS PIGGYBACK

William White—who left the presidency of the New York Central last June, following a proxy fight with Robert R. Young and associates, in which the latter were the victors—has been elected president of the Delaware & Hudson Co., effective October 1, succeeding Joseph H. Nuelle, who becomes chairman of the board. The D&H is a holding company which owns all the capital stock of the Delaware & Hudson Railroad Corp. and the Hudson Coal Company. Mr. White and Mr. Nuelle also have been elected president and chairman, respectively, of the railroad corporation.

In talking to newspapermen on September 29, when his new connection was announced, Mr. White said:

"I am delighted to become president of such a fine company as the D&H which Mr. Nuelle has brought to a high state of efficiency and the debt of which he has so substantially reduced during his incumbency. I am also delighted that he will remain as chairman and assist in the most pressing problem of endeavoring to increase anthracite tonnage. My job will be to see that the D&H is able to continue its dividend of \$1 quarterly and increase it if possible. To that end I will do everything possible to increase D&H's volume of traffic."

Asked whether he had any plans for consolidating the Delaware & Hudson with connecting carriers to form a major system, Mr. White denied any such plans. "However," he added, "you have seen where Don Fraser, president of the M-K-T, has advocated end-to-end consolidations (*Railway Age*, September 20, page 63). You may say that I agree with him." Mr. White recalled that, several years ago, when he was president of the Lackawanna, he had some informal conversations with people representing the Boston & Maine, Delaware & Hudson and Nickel Plate, regarding possible consolidation of these

properties. Nothing came of these talks at the time, he said, because the D&H people were not interested.

Some reporters endeavored to induce the new D&H president to disclose what his salary would be in his new position. His reply was: "You may say that I will be at least as well compensated as I was when I was with the Lackawanna."



William White

Asked his opinion on so-called piggybacking—whether in providing this service railroads should offer it to common carrier truckers or provide it themselves—Mr. White said he was strongly in favor of offering the service to common carrier truckers. "Here again," he said, "I agree with Don Fraser."

He called attention to the substantial reduction, compared to 20 years ago, in traffic on the Boston & Albany and New York Central lines east. He said that this traffic was still in existence, but was moving by highway. He added that, when he was with the New York Central, he had favored providing piggyback service for common carriers—as, in his opinion, the most likely means of getting a sub-

stantial part of this highway traffic back on the rails, to the advantage of both the railroad and the truck operators. He said he had no objection to dealing with truckers. "If they want to put traffic on the railroad, then I consider them customers and I welcome their business."

He was asked whether he would provide this service for common carrier truckers on the D&H and his answer was: "That will depend upon what our connections are willing to do."

Mr. Nuelle is 73 years old and Mr. White is 57. Mr. Nuelle became president of the Delaware & Hudson in 1938, when he succeeded the late L. F. Loree. Prior thereto he had been president of the New York, Ontario & Western; and of the Lehigh Coal & Navigation Co. and its subsidiaries, including the Lehigh & New England Railroad. He was educated at Dartmouth and Princeton, from which latter university he was graduated in 1906. He started his railroad career in the engineering department of the Pennsylvania and went to the NYO&W the following year.

Mr. White started railroading directly from high school, in August 1913, and had a record of uninterrupted railroad service until last June 14. He was with the Erie until 1938, when he went to the Virginian, and became president of the Lackawanna in 1941. He went to the New York Central as its president in August 1952, and had been in that position only about a year and a half when Robert R. Young presented his demands to the then directorate of the railroad. In the ensuing proxy contest, Mr. White became the champion of the existing board and consistently refused any compromise with the Young group.

On again entering active railroading Mr. White said: "One conclusion I have reached this summer is this: That I favor a three-months' vacation for every railroad man after 40 years' service."

As to "ambiguous language" in the transit tariffs, Director A. Henry Walter of the ICC bureau revealed, in his recent address to the AAR Treasury Division, that he was about ready to recommend to the commission that it request the railroads to publish clarifying revisions of both transit and demurrage tariffs. (*Railway Age*, September 20, page 71.)

The bureau's preliminary survey also covered transit arrangements maintained by common-carrier truckers. It was found that the truckers have established only a "few" transit arrangements; and that such arrangements, "do not provide for any policing worthy of the name."

Ease Regulation, Or Else Equalize It—Bowditch

"The time is rapidly approaching when shippers and public must face one of two choices. They must either say that regulation of existing carriers must be eased, or else regulation must be extended to carriers not now covered," Richard L. Bowditch, chairman of the board of the Chamber of Commerce of the United States, said at a joint meeting of the Chicago Association of Commerce & Industry and the Traffic Club of Chicago, held September 21 to mark the 50th anniversary of the Chicago association.

Mr. Bowditch shared the speakers' rostrum with Kenneth F. Burgess, Chicago attorney and civic leader, who cited the growth of the city and its transportation system during the past

50 years to highlight the luncheon meeting's theme, "Fifty Fabulous Years of Transportation and Industry." At the close of his talk, Mr. Burgess asked caution to "preserve all these different forms of transportation in full force and vigor. We must see that competition is fair so one form does not, through unnatural and artificial advantages, destroy another form."

Protection or Freedom—Mr. Bowditch, after stating the choice which shippers and public must face, went on to say that "the national well-being and security demands that we maintain a strong, balanced transportation system. This means common carriers must either be protected from unfair competition—or they must be given freedom to compete."

He saw "significance" and "something good" coming out of the recently appointed special Cabinet committee appointed by President Eisenhower to make broad recommendations on national transportation policy and organization. He also touched upon section 22 of the Interstate Commerce Act (under which carriers may offer special reduced rates for government traffic), citing reductions granted on all types of military and civilian traffic—"sometimes 70% below tariff rates," Mr. Bowditch said; adding that "if we want fair regulation, with each group paying its own share of the burden, then we must amend section 22 to stop this completely unregulated practice of rate cutting among carriers."

Deficit Trains—Turning to the passenger-train deficit problem, Mr. Bowditch termed required operation

of unprofitable services unfair, and a matter which state utility commissions seem to understand, but are reluctant to act upon. "The national chamber of commerce is a strong believer in states rights," he said. "It hesitates to advocate anything that would rob states of their powers and transfer them to the federal government. But what are we going to do when state regulatory bodies absolutely refuse to permit abandonments of unprofitable service even in the face of conclusive evidence that such service is an undue burden on interstate commerce?"

"There's need for some means of appeal to a higher authority. That's why the national chamber now takes the position that the Interstate Commerce Commission should have this authority, but *only* after state authorities have either failed to act within a reasonable time or have denied the carrier's request."

Competitive Transport

L.I.-New London Ferry Not Needed, ICC Rules

The Interstate Commerce Commission has denied the application of Remsen Lines for authority to provide Long Island-New England ferry service for truckers as a means of bypassing New York City. The Commission ruled that the applicant had not proved there



MEMBERS OF THE ASSOCIATION OF RAILROAD ADVERTISING MANAGERS recently completed an educational tour of the west, during which several business sessions were conducted. A portion of the group is

shown shortly after arrival at Las Vegas, Nev. Membership of the association, founded in 1922, includes advertising executives from railroads in the U.S., Canada and Mexico. Leo A. Brown, president of the association

and director of advertising and public relations for the Wabash, was in charge of the tour, which is made every other year. This year's tour host was Horace B. Northcott, general advertising manager of the Union Pacific.

was "immediate and urgent" need for any service that could not be provided by existing carriers. The ferry service would have connected New London, Conn., and Orient, L. I.

Rails to State Position In Airmail Experiment

Airlines were given another year to test the "first-class-mail-by-air" experiment in a Civil Aeronautics Board order effective October 1. However, the same order admitted the railroads as intervenors in a new proceeding instituted by the CAB to set final rates for the service.

In effect, the CAB order granted requests of all but one airline providing the service between New York and Chicago; Washington and Chicago; and Jacksonville, Fla., Tampa and Miami, and Washington, New York and Chicago. They had sought to have the trial extended a year past its original expiration date of September 30.

The order went further, though, by instituting the proceeding to establish final rates as of October 1, 1955, "or on such prior date as may be fixed and determined." Gregory S. Prince, attorney for the railroads and assistant general counsel, Association of American Railroads, said the roads plan no protest against the order but will raise all the issues presented in their petition to intervene (*Railway Age*, September 20, page 9).

Organizations

Next monthly dinner meeting of the **New York Railroad Club** will be held October 14 in the Century Room of the Hotel Commodore, New York. Guest speaker will be George E. Sokolsky, newspaper columnist.

N. N. Bailly, vice-president and general manager of the Jersey Central Lines, will speak at a meeting of the **Eastern Car Foreman's Association**, in the Engineering Societies Building, New York, at 7:45 p.m., October 8.

Rates & Fares

Truckers Want Lower Montreal-Toronto Rates

The Quebec Transport Board has been asked by the Quebec Automotive Transport Association to approve lower rates for freight moving by truck between Montreal and Toronto.

The Quebec truckers' request came

shortly after the Canadian Pacific and Canadian National had reduced rates on certain commodities moving between the two cities in box cars and railroad-operated trailers-on-flat-cars (*Railway Age*, September 27, page 7). Ontario truckers, who do not need approval to change rates, already have lowered their tariffs.

Labor & Wages

Rail Retirement Board Job Shuffle Opposed

Railway labor has protested to the Civil Service Commission a proposed reclassification of 10 key positions on the Railroad Retirement Board. The jobs range from a liaison representative post to that of chief executive officer.

In a petition filed by their attorney, Robert T. Murphy, the Railway Labor Executives' Association and the Brotherhood of Locomotive Firemen and Engineers, declared the reclassification would set a "bad precedent." The classification switch would remove the 10 jobs from Civil Service roles and make them appointive.

The retirement board voted two-to-one for the reclassification with Chairman Raymond Kelly and F. C. Squire, railroad representative, voting for, and Horace W. Harper, labor member, against. The Civil Service Commission must pass on the proposal.

People in the News

Mahaffie Age Poses Question of Continuance

Interstate Commerce Commissioner Charles D. Mahaffie will become 70 years of age December 5, and that is prompting speculation as to prospects for his continuance in office after the end of the year.

The general requirement of the federal retirement rule is that government employees must retire at the end of the month in which they become 70, unless they are exempt by Presidential order. In the Mahaffie case, however, there is a legal question as to whether he would require a Presidential exemption order to continue in office until the end of his present term, which runs through December 31, 1958.

Legal Question—That question is based on a contention that, when the President appoints a person to a specific term which runs through that person's 70th birthday, the President is presumed to have known the appointee's age. Thus, it is argued, the appointment carries the exemption from

the compulsory retirement rule until the end of the term involved.

That theory is substantially the same as the one embodied in the legal opinion on which Commissioner J. Monroe Johnson has relied in his successful resistance to White House efforts to oust him. The Johnson case, however, is different in that the colonel, now 76 years old, was appointed by former President Truman to his present term (which ends December 31, 1955) after he was 70. Moreover, the legal theory did not get a court test, since the White House has seemingly abandoned its undertaking to oust the colonel.

Patterson Case—The case of former Commissioner William J. Patterson was more nearly on "all fours" with the Mahaffie case; but there, again, the White House (in the Truman administration) backed away from the legal issue. When Mr. Patterson became 70 on June 4, 1950, he was serving a term which ran through December 31, 1952. No exemption order came in timely fashion from the White House, but Mr. Patterson sat tight, even though his uncertain status resulted in his salary being stopped as of June 30, 1950.

Within a short while, President Truman issued an executive order exempting Mr. Patterson from the compulsory-retirement rule, as of July 1, 1950, and until the end of his term. So the legal issue was avoided. It was not raised in the case of former Commissioner Walter M. W. Splawn, who became 70 on June 16, 1953 while serving a term which ran through December 31, 1954. Dr. Splawn submitted his resignation, effective as of his "compulsory-retirement" date — June 30, 1953.

Mahaffie Called "Tops"—Discussions of the Mahaffie case in railroad circles point up the great respect in which the commissioner is held, and the hope of railroad men generally that he will be kept on the job. In such discussions, the appraisals of Mr. Mahaffie call him "tops" as a commissioner and an "outstanding public servant."

Such appraisals appear to have no basis in thoughts that Mr. Mahaffie is "railroad-minded." They seem bottomed on a widespread feeling that he has a background and judicial approach which have blended to endow him with the "ideal" disposition for a regulator. One high-placed railroad officer has said he knows of no important railroad executive who does not favor Mr. Mahaffie's continuance on the commission.

White House "Tough"—Meanwhile, however, all indications are to the effect that the White House has become most reluctant to grant exemptions from the retirement-at-70 rule. Presumably, also, the administration's political strategists would like to see something done about demands that one of the "Democratic" places on the commission be given to an "Ike Democrat." Thus, Mr. Mahaffie's tenure after December 31 might well

depend upon his disposition to remain on the job, taking the legal position which was posed, but not tested, by the Patterson case.

The commissioner thus far has remained silent about the whole situation. Persons close to him have indicated that he would, perhaps, like to remain on the job if a Presidential order exempting him from the retirement rule were forthcoming. At the same time, he is reported to have received no communication from the White House on the matter. It is also reported that he has not yet made up his mind as to what, if anything, he might do in the way of making a "fuss" about staying in the absence of an exemption order.

Mr. Mahaffie has been a member of the commission since 1930, when he was appointed by former President Hoover as a career man. He had been director of the commission's Bureau of Finance from 1922.

Hall Appointed Director Of Locomotive Inspection

John A. Hall, who has been serving as special assistant to the grand chief engineer of the Brotherhood of Locomotive Engineers, has been appointed

by President Eisenhower to the position of director of locomotive inspection, Interstate Commerce Commission.

It is an interim appointment, while Congress is not in session, Senate confirmation being required for permanent tenure in the position. It was also a surprise appointment, since none had been expected so soon after the President withdrew his nomination of Charles H. Grossman for the position. (*Railway Age*, August 16, page 8.)

New Facilities

L&N-NC&StL Dedicate New Radnor Yard

Radnor yard, new \$15-million, 56-track joint facility of the Louisville & Nashville and the Nashville, Chattanooga & St. Louis near Nashville, Tenn., was formally dedicated September 22. John E. Tilford, president of the L&N, and chairman of the executive committee of the NC&StL, presided at the dedication ceremonies, which were witnessed by some 75 financiers and industrialists from the

north, east and midwest who were guests of an L&N "Sell the South" tour.

The ceremonies included an address of welcome by Beverly Briley, judge of Davidson county, in which Radnor is located; presentation of the new yard "for public service" by A. L. M. Wiggins, chairman of the board of the L&N; and its acceptance, on behalf of the public, by Hammond Fowler, chairman of the Tennessee Railroad & Public Utilities Commission; and on behalf of shippers by E. C. Tompkins, manager of the Neuhooff Packing Company. G. T. Austin, yard foreman, Nashville Terminals, spoke on behalf of employees.

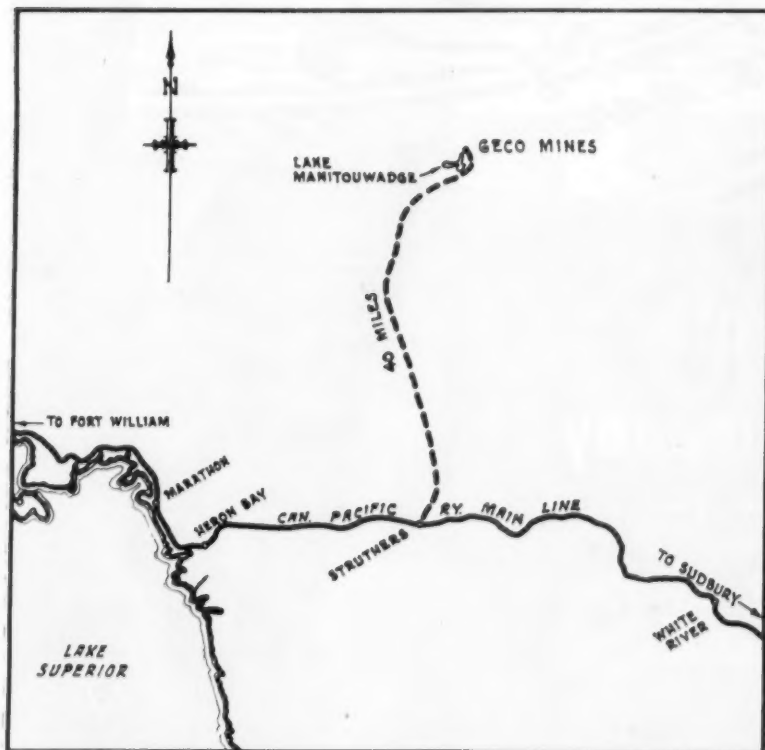
"The cost of this yard has, for the most part, been paid out of retained earnings of these railroads," said Mr. Wiggins, who predicted the annual return on their investment would exceed 16%. He also announced that, "Of the 800 acres of land acquired for this project, a substantial acreage will be available for industrial development"; and added: "Consolidation at Radnor yard of operations formerly carried on in the old yards in the heart of Nashville makes possible the utilization of a most valuable property for business and industrial use to meet the growing needs of the city."

A feature article about various aspects of the new yard will be published in an early issue of *Railway Age*.

Illinois Central.—The Interstate Commerce Commission has approved this road's application for authority to construct an extension of its line at Louisville, Ky., to provide direct service to the Paddy's Run plant of the Louisville Gas & Electric Co. and a plant of the National Carbide Corporation. The application was opposed by the Kentucky & Indiana Terminal and its owner-railroads. The terminal company currently provides switching and terminal services to the two plants. The extension consists of about two miles of track including siding and storage track.

Rock Island.—Renovation of underpasses at 55th and 57th streets, Chicago, is being carried out by F. K. Ketter Company at a cost of \$79,450. The work includes repairing of steel, waterproofing and conversion to ballasted deck. At Kansas City, Mo., a new underpass being erected at Manchester road by List & Weatherly Construction Co., at cost of \$26,000, involves a concrete substructure and erection of two 55-ft deck-plate girder spans. The company also is building concrete substructure and erecting three wide-flange beam spans at Antelope, Kan., at a cost of \$42,800.

Southern Pacific.—Enlarging and retimbering a 3,610-ft tunnel near Cuesta, Cal., has been completed and the company soon will begin installation. (Continued on page 16)



CANADIAN PACIFIC'S new 40-mile branch from Struthers, Ont., to Geco (*Railway Age*, September 27, page 12), will aid development of promising mineral discoveries in the Manitowadge Lake area. The region also

has considerable stands of pulpwood. The CPR already has earmarked \$900,000 for the new branch, of which \$800,000 is for grading, and \$100,000 for clearing. Estimated total cost of the line has not been revealed.

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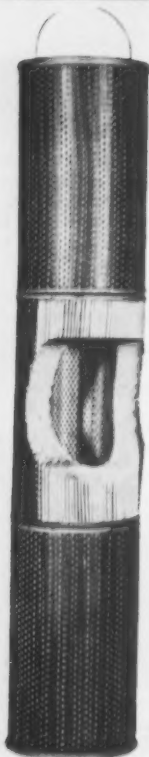
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New Facilities

(Continued from page 13)

tion of continuous reinforced concrete lining in the first 640-ft section at the west end. Estimated cost of this lining job exceeds \$200,000. The company expects to continue the concreting work until the entire tunnel is lined.

Western Maryland.—Construction of two new warehouses and relocation of the passenger station—first phase in redevelopment of the WM's Hillen Terminal at Baltimore—has begun. The new passenger station is almost completed. Warehouse No. 1 will be 70 ft by 600 ft and will be divided into four sections, each of about 10,000 sq ft. The elevation of the warehouse's reinforced concrete floor will match that of floors of freight cars and motor trucks. Twenty doors are to be provided on the truck side and eight on the track side. Warehouse No. 2 will be similar in design, but its length will be 500 ft. Layout provides for three tracks between the two warehouses for railroad freight. The present turntable will be removed and the pit filled, permitting the enginehouse to be leased.

Securities

Authorizations

APACHE.—To issue 3,000 shares of 5%, \$100-par preferred stock and \$600,000 of 4% first mortgage serial refunding bonds in exchange for \$900,000 of 5% income bonds. Dated July 1, 1954, the new bonds would mature in 20 equal installments of \$30,000 each beginning June 30, 1955 (*Railway Age*, August 30, page 10.)

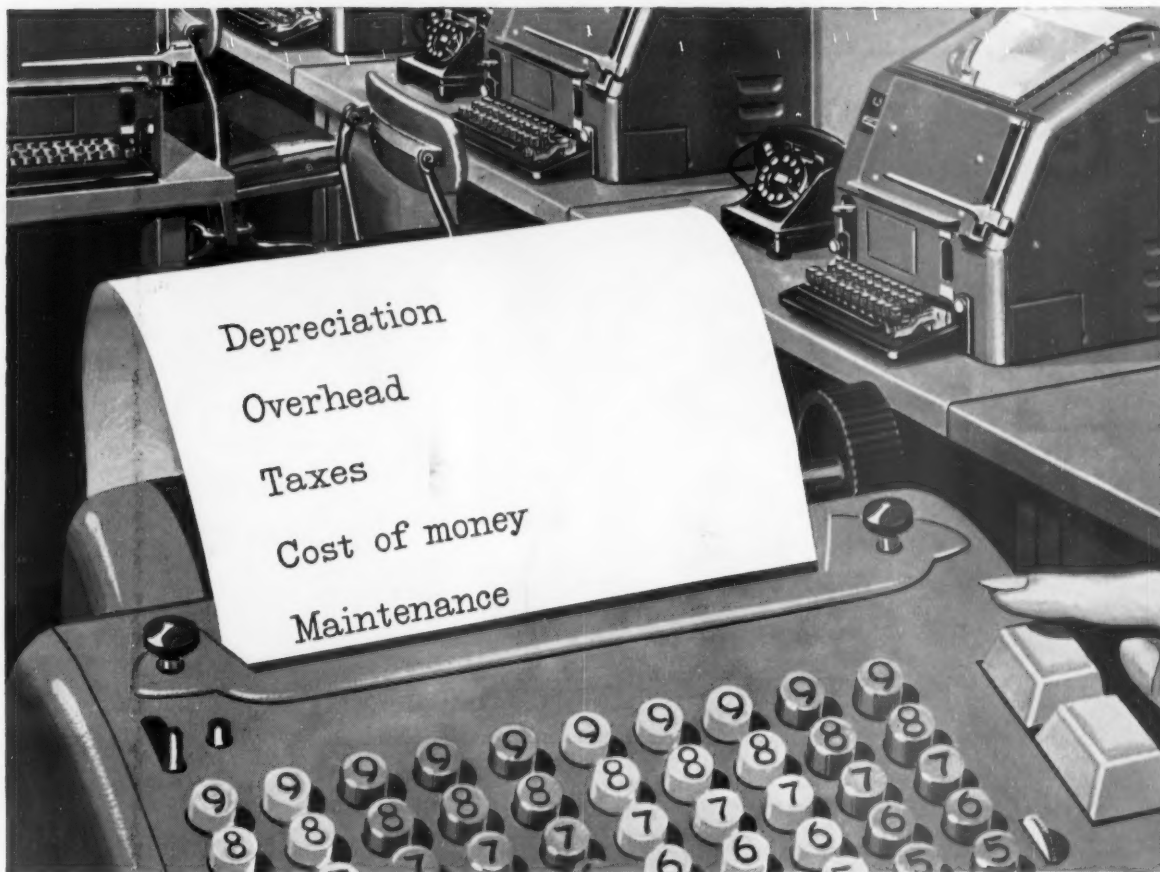
CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for \$2,700,000 of equipment trust certificates, second installment of a \$7,800,000 issue, to finance in part 56 diesel road-switching units, 50 "Airlide" hopper cars and two sleeping cars costing an estimated \$9,890,844 (*Railway Age*, June 28, page 24). Division 4 approved sale of the certificates with a 2¼% interest rate for 99.3%—the bid of Halsey, Stuart & Co. and seven associates—which will make the cost of the proceeds to the road approximately 2.9%. The certificates, dated July 1, will mature in 30 semiannual installments of \$90,000 each, beginning January 1, 1955.

CHICAGO, ROCK ISLAND & PACIFIC.—To issue \$16,000,000 series B first-mortgage bonds to reimburse its treasury in part for expenditures made for additions and betterments, and to pledge and repledge them up to September 30, 1956, as collateral security for short-term notes. Dated January 1, 1954, the bonds are to mature January 1, 1984 and would bear interest at the rate of 3%.

ILLINOIS CENTRAL.—To issue \$60,000,000 of series H first-mortgage bonds, the proceeds to go toward redemption of \$60,628,000 series E, 3½% bonds outstanding (*Railway Age*, September 6, page 57). Division 4 approved sale of the securities at 99.3% with a 3½% interest rate—the bid of Halsey, Stuart & Co. and 112 associates. To be dated September 15, the bonds will mature September 15, 1989.

Applications

NEW YORK, CHICAGO & ST. LOUIS.—To assume liability for \$1,020,000 of equipment trust certificates to finance in part the purchase of 150 50-ton box cars from the Greenville Steel (Continued on page 63)



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Owning and operating your communications system can be a costly experience, with many costs frequently overlooked. Depreciation, taxes, overhead, maintenance, loss of interest on capital all contribute to your total communication expense.

Bell System communications are low in cost. You pay only a fixed monthly charge for services tailored to your exact needs. No more, no less. Your capital is not tied up but left free for income-producing investments in *your* business.

Service has just begun when Bell System communications are installed. Maintenance, replacement, inventory, storage, extension and rearrangement of service are all handled rapidly and efficiently—no longer problems for you.

Let us show you how Bell System know-how and experience can be put to work to solve your communications problems. For a complete communications study, made without charge, call your local Bell Telephone representative today.

BELL TELEPHONE SYSTEM



TELEPHONE MOBILE RADIO TELETYPEWRITER INTERCOMMUNICATION AND PAGING SYSTEMS TELEMETERING AND REMOTE CONTROL

NOW IT'S

64

RDCs

for the

BOSTON & MAINE

About a year ago the Boston and Maine bought three more Budd, stainless steel, self-propelled RDCs. That raised their total to nine.

And we advertised then, in a manner which in retrospect may seem a trifle smug: "The Boston and Maine provides another example of how experience with Budd RDC leads to more orders."

A few weeks ago another "more" order came in from the Boston and Maine. *This time, for fifty-five RDCs.* It makes the Boston and Maine the largest owner of RDCs in the world and is part of the modernization program of the road's passenger-carrying equipment.

Together with twelve new diesel locomotives, these RDCs will replace 235 older type commuter coaches and seventy-five steam engines.

What they will save in operating and maintenance expense, including the flexibility of applying power and crews to traffic, the Boston and Maine well knows from past RDC experience.

What they will save in yard costs is another important sum.

The railroad estimates an over-all saving, per year, of at least \$1,700,000. Won't take long for those cars to pay for themselves.

Buried in the publicity release announcing the order is a sentence any railroad might well ponder: "Each of the new units will be used in an average of eleven trains each week-day." How's that for utilization!

One thing that doesn't show up in the cost/savings figures is public response. People *like* to ride in RDC.

The Budd Company, Philadelphia 15.



ANOTHER STEP IN COMPLETE TRAIN COMMUNICATIONS TO FIT ALL NEEDS



The New *Bendix* PAK-SET ...more power per pound!

Want big set performance in a small package? Then look at the new . . . versatile and rugged Bendix* MRT-9. Available in 3-versions. A Bak-Pak . . . A Han-Pak . . . and a Shoulder Pak.

Cubic displacement 1/6 to 2/3 less than other units now in service . . . yet the Bendix MRT-9 provides as much as 4 times more power output.

LIGHTWEIGHT . . . weighs only 8-1/2 pounds with dry battery. Nominal output . . . 1 watt.

SINGLE OR DUAL CHANNEL operation. Receive and transmit.

MINIATURIZED design . . . with big set accessibility for servicing.

SEPARATE BATTERY case. Plug connected and easily removable. Either dry or wet cell pack available. Dry batteries are standard flashlight and commercially available "B"

RECEIVER SENSITIVITY . . . 1 microvolt or less for 20 db of quieting.

EXTERNAL volume and squelch control. External channel selection . . . Choice of insulated or non-insulated antenna.



Bendix Radio

BALTIMORE 4, MARYLAND

Chicago Sales Office
188 W. Randolph St.
Chicago, Ill.

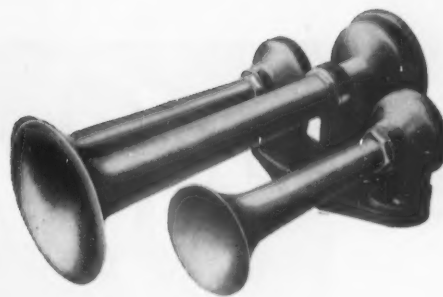
West Coast Sales:
10500 Magnolia Boulevard
North Hollywood, California

Canadian Distributor:
Aviation Electric, Ltd.
200 Laurentian Boulevard
Montreal, Quebec

Export Sales:
Bendix International Division
205 E. 42nd Street
New York 17, N. Y., U. S. A.

DIVISION OF
BENDIX AVIATION CORPORATION





Sounds like the old steam whistle


and you can hear it
miles away—

the **Westinghouse**
E-2B PneuPhonic Horn

Westinghouse Air Brake E-2B PneuPhonic Horns are completely interchangeable with the present mounting base on your locomotives.

A low, medium, or high-pitched sound is available to suit your individual preference. No matter which style you choose, you get a pleasant 3-note chord that simulates the steam whistle with amazing fidelity.

Westinghouse Air Brake
COMPANY

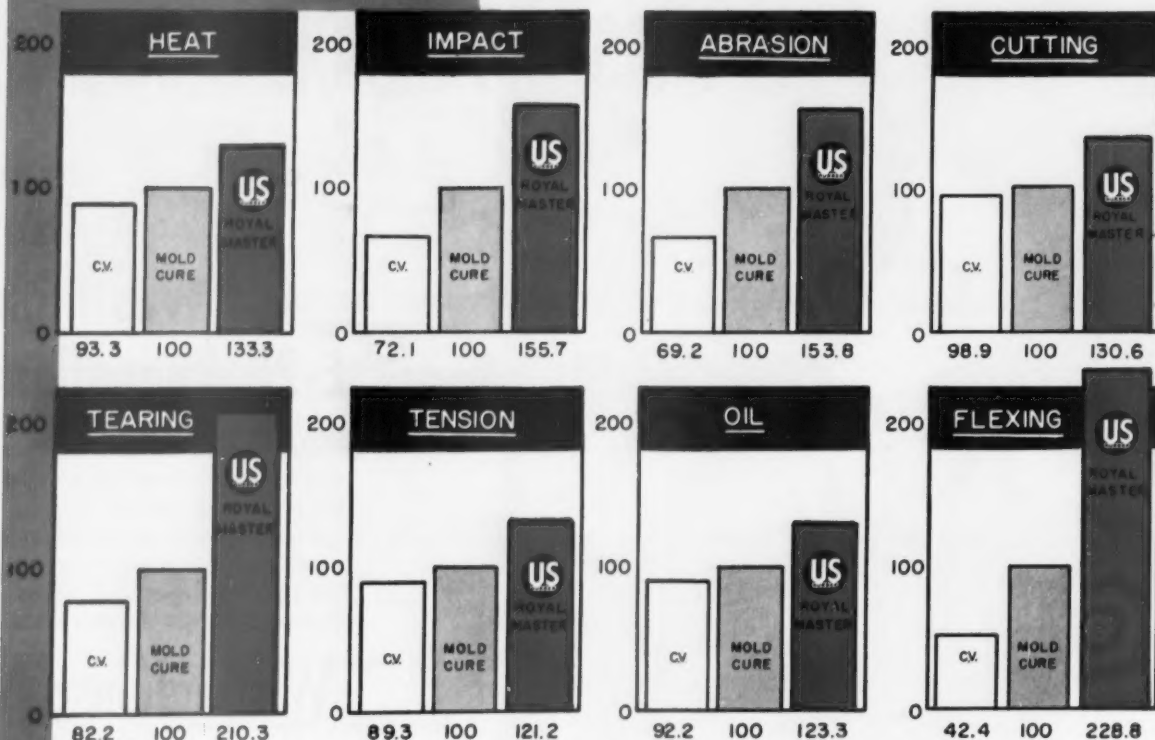
AIR BRAKE DIVISION  WILMERDING, PA.

NEW MOVIE AVAILABLE entitled, "AT THIS MOMENT"—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.



New

U.S. ROYAL outperforms,



Comparative performance of portable cords related to major life factors.

Graphs illustrate the outstanding superiority of new U. S. Royal Master Cord — over the average of molded cords and the average of short-lived continuous vulcanized cords of other makes — on every major life factor. (Average of other molded cords is rated at 100%.)



UNITED STATES

ELECTRICAL WIRE AND CABLE DEPARTMENT

MASTER portable cord outlasts all others!

Comparative tests show U. S. Royal Master gives \$1.88 in value for every \$1.00 spent — almost twice the service value of the average of other molded cords!

LOOK FOR THE NAME — U. S. ROYAL MASTER



Two years ago, "U. S." engineers began a *complete reexamination* of portable cord construction, service life, and the causes of cord failure.

Over 10,000 tests were made. More than a thousand cords of all leading makes, including our own famous U. S. Royal Cord, were analyzed, tested, and compared.

Every life factor was considered and carefully evaluated, alone and in its relation to overall cord performance and service life.

Backed by 64 years of experience in the manufacture of electrical wire and cable, U. S. Rubber engineers then translated their findings into an entirely new portable cord, designed to surpass any other previously made.

Extensive tests, both in the laboratory and in outside plant installations have proved this new portable cord startlingly superior in every respect!

New U. S. Royal Master is unquestionably the finest cord you can buy!

From every standpoint, as the charts at left illustrate, new U. S. Royal Master is a finer, more durable cord—actually gives 88% longer life than the average of competitive molded cords—far longer than *any* other cord—surpassing even a hypothetical cord incorporating the best features of all those tested!

Far greater value, too! In spite of almost doubled service life, this great new cord is in the same price category as other molded cords—giving you \$1.88 in cord value for every cord \$1.00!

Prove to yourself the outstanding superiority of new U. S. Royal Master Portable Cord — in both service life *and* economy! Get in touch with your "U. S." distributor today!

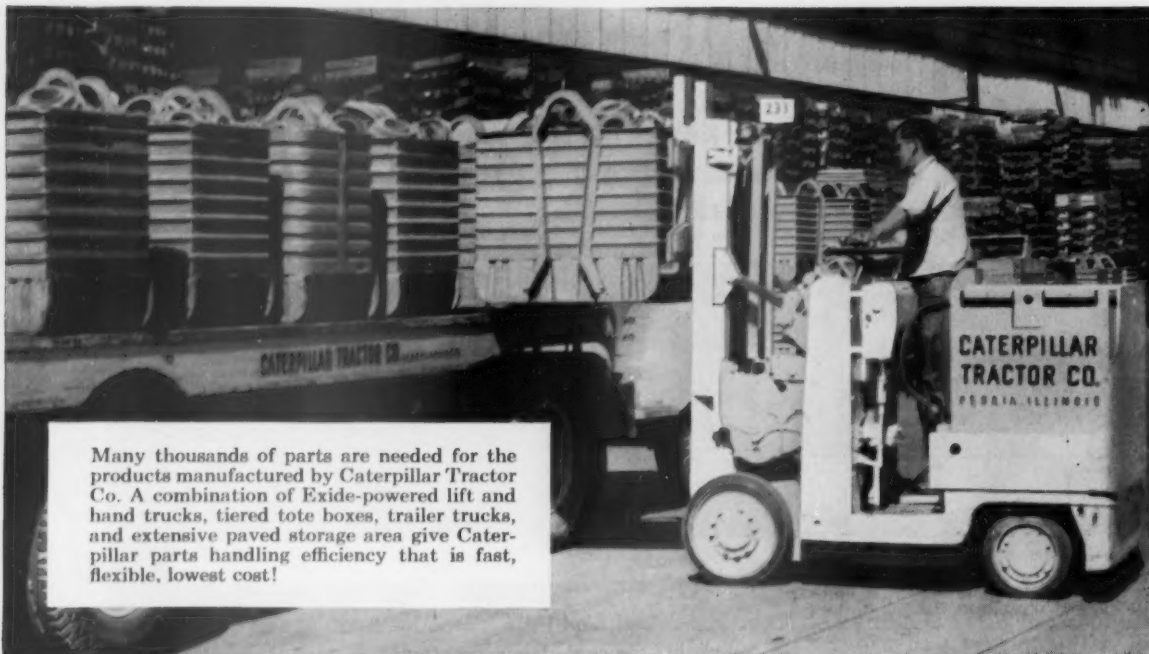
Approved by Underwriters' Laboratories, Inc.

RUBBER COMPANY

ROCKEFELLER CENTER, NEW YORK 20, N. Y.

GET FAST, SAFE HANDLING THROUGHOUT EACH SHIFT

... with low cost Exide-Ironclad battery power!



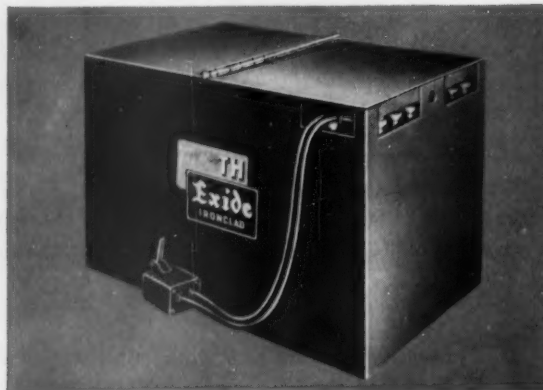
Many thousands of parts are needed for the products manufactured by Caterpillar Tractor Co. A combination of Exide-powered lift and hand trucks, tiered tote boxes, trailer trucks, and extensive paved storage area give Caterpillar parts handling efficiency that is fast, flexible, lowest cost!

YOU GET split-second handling, uniform performance throughout each shift when electric trucks are powered by dependable Exide-Ironclads. Whether the load is light or heavy, Exide-Ironclads deliver power instantly, insuring smooth, rapid handling of materials. Your trucks handle as much

pay load during the last hour as during the first ... with no unscheduled down time. Lower costs for operation, maintenance and depreciation make Exide-Ironclads your best power buy—AT ANY PRICE!



THE POSITIVE PLATES are the heart of any battery. Only Exide uses a slotted tube construction. By use of tubes, more active material is exposed to the electrolyte, providing greater power. Also, more active material is retained, giving longer working life.



THE NEW THRIFTY HAULER! The improved industrial truck battery. Non-oxidizing plastic power tubes assure longest battery life, more capacity in the same space. For full details, call your Exide sales engineer—write for Form 1982 (Installation and Maintenance of Motive Power).

Your best power buy
... AT ANY PRICE!

Exide®

IRONCLAD® BATTERIES

Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

"Ethyl" Diesel Ignition Improver



... is now being used in fuels for diesel locomotives

Year-long tests on two railroads have just confirmed that the cetane number of diesel fuels can be effectively raised with this Ethyl additive.

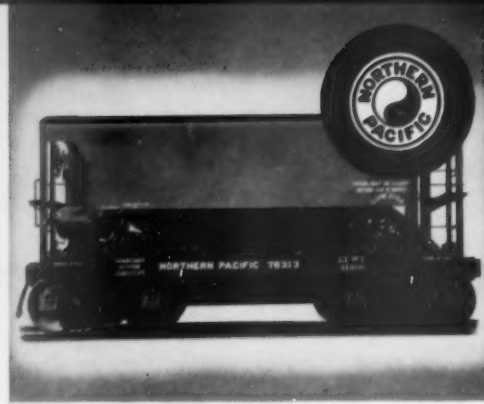
Ethyl's new additive offers many advantages to railroad users. It makes

available diesel fuels with lower pour point, higher volumetric heating value, and more uniform ignition quality. This tends to minimize cold-weather operational problems, increase operating economy, and reduce maintenance costs.

ETHYL CORPORATION

New York 17, New York

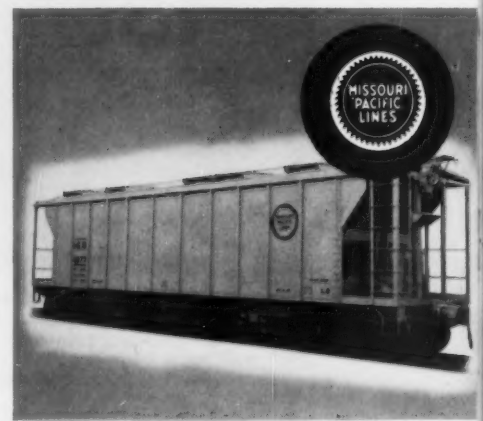


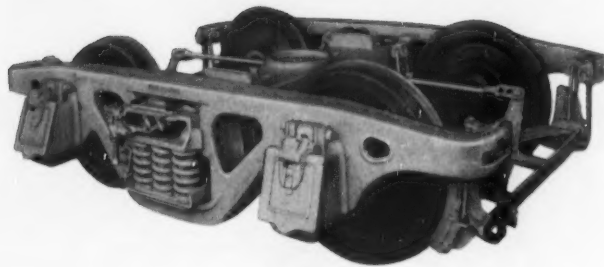


For New Ore



AND NOW... { RESERVE MINING COMPANY CHOOSES A-3's FOR 350 ORE CARS
QNSL ORDERS 850 ADDITIONAL CARSETS





Cars

*Specify smooth-riding
Ride-Control® Trucks
that are tailor-made
for your operations!*

Rarely will you find two ore-hauling problems that are entirely alike. That's why practically all major ore shippers specify Ride-Control Trucks. They know that ASF is the only truck-design specialist in a field where specialization insures the *right equipment for the job*.

Heavy loads and severe grades present many problems. For example, the car must be compact—requiring a truck with carefully designed members and often with odd-size wheel base. Brake design, whether clasp or single shoe, must be *integrated* with truck design . . . a problem on which ASF's combined staff of truck and brake engineers can offer you constructive help. And last but not least, the truck has to ride smoothly so that the car will *work together with the roadbed*, instead of pounding itself into the repair shop.

In short, by any yardstick you use—past experience or present engineering facilities—ASF is in a unique position to design the truck that's right for *your* requirements!

RIDE-CONTROL, A-3

Application based on ASF experience with ore car truck design

Railroad	Carsets
Bessemer & Lake Erie	1,200
Chicago & North Western	300
Duluth, Missabe & Iron Range	5,500
Electro Metallurgical	41
Great Northern	700
Gulf, Mobile & Ohio	100
Louisville & Nashville	252
Soo Line	100
Northern Pacific	600
Orinoco Mining	560
Quebec, No. Shore & Labrador	1,200*

*Made in Canada

TOTAL

~~10,753~~
New Total 11,753

ASF

AMERICAN STEEL FOUNDRIES

410 N. Michigan Avenue, Chicago 11, Illinois

Canadian Sales: International Equipment Co., Ltd.,
Montreal 1, Quebec



Lower Parts Inventory

WITH OPPOSED-PISTON DIESELS

Did You Know that the Fairbanks-Morse Opposed-Piston engine requires the lowest parts inventory per horsepower in service?

You'll find this true on road after road.

Why?

O-P design eliminates 40% of the moving—wearing—parts found in comparable engines.

These are parts that must be maintained, adjusted, replaced—and must be protected with repair parts inventory.

PROOF . . . *that horsepower for horsepower
the O-P is the easiest engine to maintain*

Fairbanks, Morse & Co., 600 South Michigan Avenue, Chicago 5, Illinois



FAIRBANKS-MORSE

a name worth remembering when you want the best

DIESEL LOCOMOTIVES, ENGINES • RAILCARS, RAILROAD EQUIPMENT • ELECTRICAL MACHINERY • PUMPS • SCALES • WATER SERVICE EQUIPMENT • HAMMER MILLS • MAGNETOS

SHELL TALONA R OIL 40

*Fastest growing
railway diesel lubricant
in the U.S.A.*

IN THE TWO YEARS SHELL TALONA
R OIL 40 HAS BEEN AVAILABLE,
THE VOLUME OF SHELL'S RAILWAY
LUBRICANT BUSINESS
HAS INCREASED

81%

One Big reason!

ENGINE WEAR

CUT ONE-THIRD



THROUGHOUT the railroad industry Shell Talona R Oil 40 is setting a new standard of anti-wear performance never before achieved or thought possible.

A recent survey on railroads shows that costs for engine cylinder maintenance are reduced considerably when Shell Talona R Oil 40 is used. The average saving was more than one third.

Manufactured from premium base oil plus compatible additives, Shell Talona R Oil 40

offers railroad operators these outstanding advantages:

1. Superior anti-wear protection
2. Excellent detergent-dispersant action
3. Outstanding oxidation stability
4. Maximum engine performance

In all types of railroad diesels Shell Talona R Oil 40 is the answer to reduced maintenance costs. See the Shell Railroad Service Engineer for additional details.

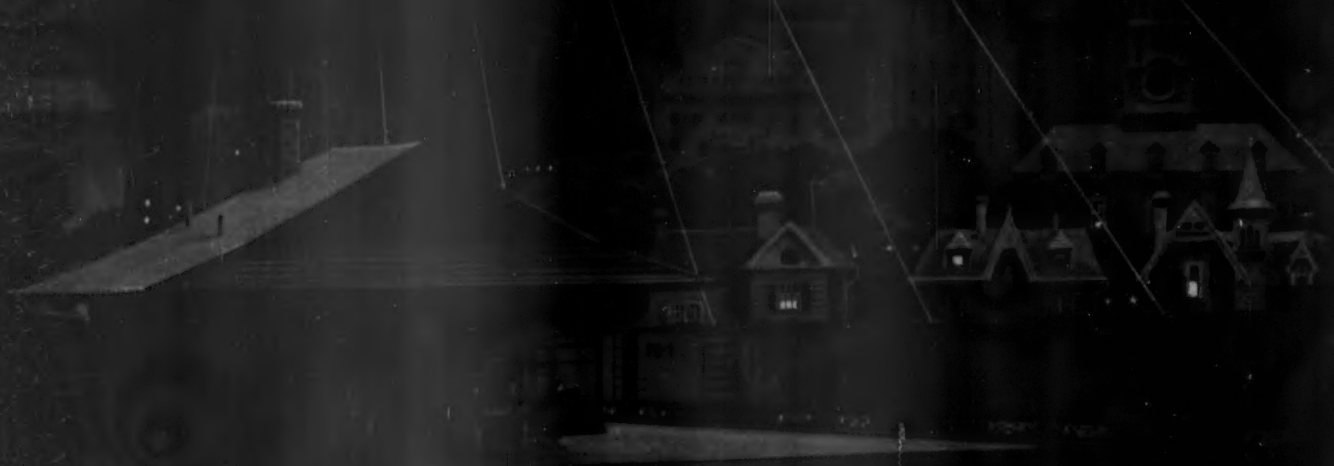
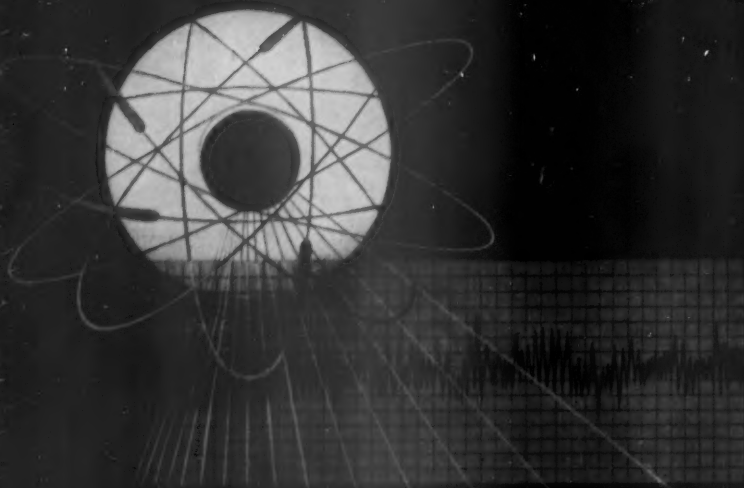
SHELL OIL COMPANY

50 West 30th Street, New York 20, New York

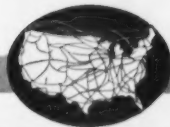
100 Bush Street, San Francisco 6, California • Shell Building, St. Louis 3, Missouri



One success story after another



passed by last night
on the



GREAT AMERICAN RAILWAY *System*

In Montreal and Mexico City, in Tacoma and Tampa you could have seen PS-1 Box Cars on the move last night.

They are the result of research and design which anticipates the wide range of conditions on the Great American Railway System*. And, because they are built to "take it" anywhere, on this system of 402,603 miles of track, they can be counted on to perform at the lowest cost per ton mile, per year of service.

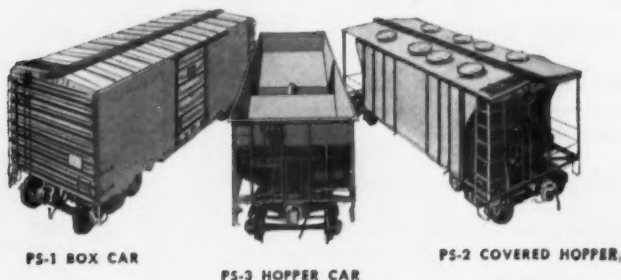
Pullman-Standard sales and service engineers *know* that the 58,000 PS-1 Box Cars, owned by 60 railroads, are establishing outstandingly successful service records. These engineers, traveling over 100,000

miles north, south, east and west every year, study cars of all makes. They search for the origin of parts failures, then follow-up to find out whether the cures are effective. They know the cause and effect of the toughest operating conditions everywhere.

The findings have influenced the construction of the PS-2 Covered Hopper Car and the PS-3 Hopper Car as well as the PS-1 Box Car. And their reports have helped many railroad mechanical men compare car construction values. Thus engineering that starts in the field, contributes to the successful operation of the cars that are designed and built to serve best on the Great American Railway System.

*A typical box car moves, in one year, on 39 different roads, including two or more trips on 24 roads. (A.A.R. data)

Built to serve best on the
GREAT AMERICAN RAILWAY SYSTEM



PS-1 BOX CAR

PS-3 HOPPER CAR

PS-2 COVERED HOPPER

YOUR NEEDS CREATE THE PULLMAN "STANDARD"

PULLMAN-STANDARD

CAR MANUFACTURING COMPANY

SUBSIDIARY OF PULLMAN INCORPORATED

79 EAST ADAMS STREET, CHICAGO 3, ILLINOIS

BIRMINGHAM, PITTSBURGH, NEW YORK, SAN FRANCISCO, WASHINGTON



This typical signal installation relies on Nicad Batteries for positive action at all times — day-in, day-out.

Keeping signals on the track?

... that's a job for Nicad

Yes, Nicad Batteries provide a dependable power supply for switch points, track circuits, crossing gates, CTC and car retarders — and for interlocking, too.

Used in Europe for many years wherever vital services are involved, nickel cadmium batteries are manufactured in America by Nicad.

Their positive action, long life and low overall costs are among the outstanding features of these batteries with steel constitutions. They are easy to maintain on float, or trickle charge — can stand long periods of idleness. What's more, they perform dependably over a wide temperature range, have small voltage differential between on-charge and off-charge.

If you would like more reliability plus more trouble-free operation in your service, why not investigate Nicad? Data available.



NICAD

*The Battery
with the
Steel Constitution*

Send this coupon for information on Nicad

NICKEL CADMIUM BATTERY CORPORATION
Box 511, Easthampton, Mass.

40311

Please send me authoritative data on Nicad Batteries. We are interested in the fields checked below.

- | | | | | |
|---|--|---|--|---------------------------------------|
| <input type="checkbox"/> Signal Service | <input type="checkbox"/> Crossing Gates | <input type="checkbox"/> Track Circuits | <input type="checkbox"/> Car Retarding | <input type="checkbox"/> Interlocking |
| <input type="checkbox"/> Stationary Engine Starting | <input type="checkbox"/> Telephone Service | <input type="checkbox"/> Switchgear Operation | | |
| <input type="checkbox"/> Emergency Light and Power | <input type="checkbox"/> Communications | | | |

Name.....

Function.....

Company.....

No. and St.....

City..... Zone..... State.....

Letters from Readers

Dramatize "Advantages"

HINSDALE, ILL.

TO THE EDITOR:

Favorable public opinion encourages favorable legislative enactment. Public opinion often is influenced most by events that are graphic and dramatic.

The time appears opportune for the railroads to launch a series of nationwide demonstrations of their inherent advantages; cost advantages and travel advantages to the public.

After suitable advance publicity, there should be three principal demonstrations:

1. *Long-distance cost saving by rail.*

A loaded freight train of a hundred cars, and a loaded heavy truck, railroad owned and operated, might leave New York at the same time, bound for the Pacific coast (or vice versa). Progress of the two hauls would be followed in the national press, and on arrival at destination the relative costs of hauling, per ton, would be given wide publicity through institutional advertising.

2. *Medium-distance freight service and convenience.*

Examples would be (a) piggyback operation, and (b) door-to-door consignments that are not suitably handled by truck; loadings requiring special equipment.

3. *Modern passenger trains.*

An eastern train would tour the West; a western train would tour the East.

Aside from the advertising, the cost of these demonstrations should be low because pay-loads would be carried. At their conclusion, a tactful explanation of why the public does not always obtain full advantage of the cost saving by rail might be in order.

There is no precedent for the conditions the railroad industry now is facing. Unusual conditions require unusual actions and remedies. But the need of determination and follow-through is just the same now as it was out on the plains in the early days.

HUGH G. DUGAN

Believes Stockholders Should Sue to Stop Expropriation

MASSACHUSETTS

TO THE EDITOR:

I feel I must take exception to your editorial, "Learning to Live with Socialism" (*Railway Age*, September 6, page 41). The fact that other segments of the economy greedily accept and expect special benefits is no reason for the railroads to follow suit. Of course where the choice is compromise or complete socialism as on the Long Island, compromise is better. A reduction in taxes is really not socialism, though, since much of the tax on the

PEERLESS

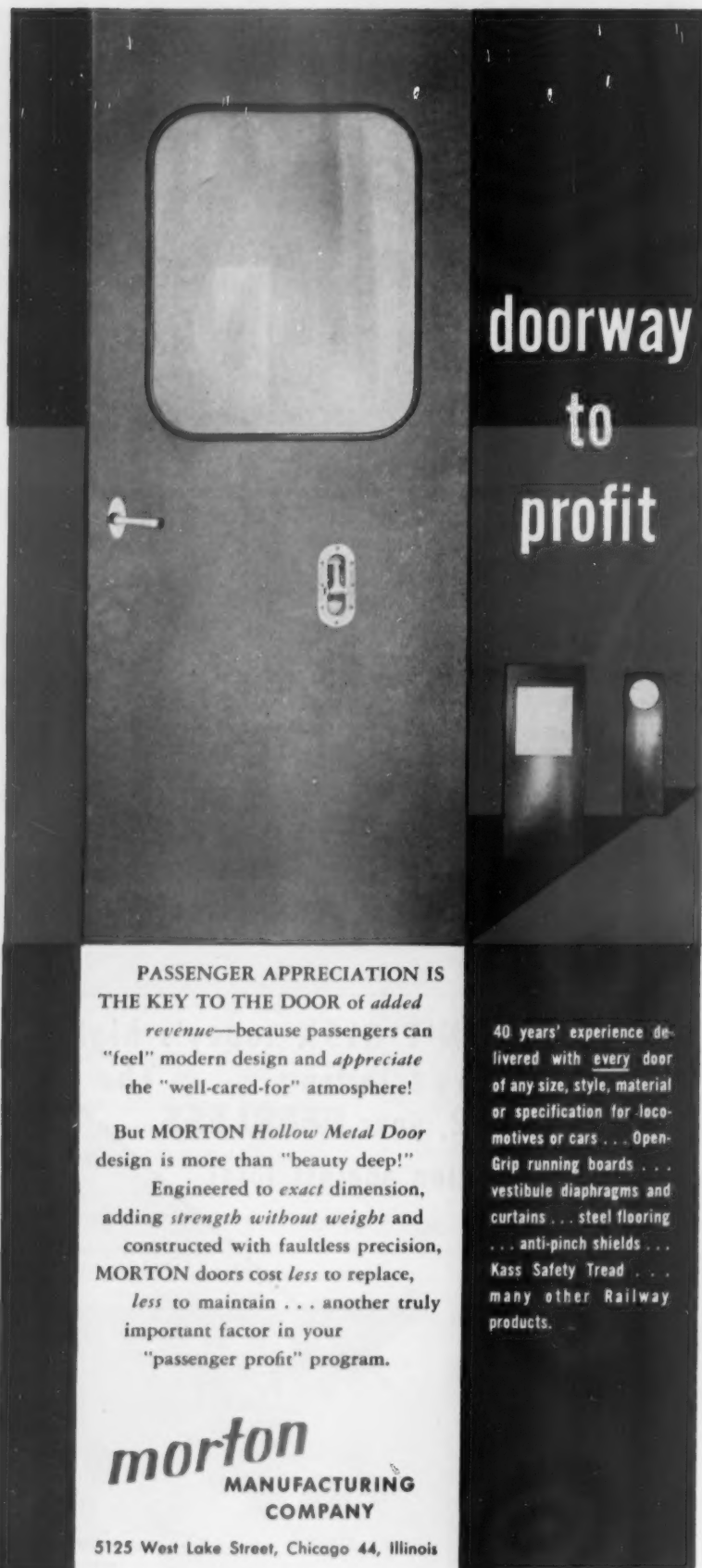
PROTECTION

DON'T RISK today's high-priced lading . . . The H-I-B2, your **PEERLESS** protection against loss!

PEERLESS
EQUIPMENT
COMPANY

332 SOUTH MICHIGAN AVENUE
CHICAGO 4, ILLINOIS





**doorway
to
profit**

PASSENGER APPRECIATION IS THE KEY TO THE DOOR of added revenue—because passengers can “feel” modern design and appreciate the “well-cared-for” atmosphere!

But MORTON Hollow Metal Door design is more than “beauty deep!”

Engineered to exact dimension, adding strength without weight and constructed with faultless precision, MORTON doors cost less to replace, less to maintain . . . another truly important factor in your “passenger profit” program.

morton
MANUFACTURING
COMPANY

5125 West Lake Street, Chicago 44, Illinois

40 years' experience delivered with every door of any size, style, material or specification for locomotives or cars . . . Open-Grip running boards . . . vestibule diaphragms and curtains . . . steel flooring . . . anti-pinch shields . . . Kass Safety Tread . . . many other Railway products.

Letters from Readers

Long Island was based on plant improvements such as grade crossing eliminations which should be considered as belonging to the highway system.

The cause of States' Rights, in much the same condition today as the cause of free enterprise, has been brought to the attention of many by the refusal of such states as Indiana to accept certain “federal aid.” By accepting aid the railroads would lose the argument that they are the only free-enterprise form of transportation.

The railroads have not been consistent on the subject of Socialism. They want only long-distance transport de-socialized. I believe that the cost of maintaining every highway, road, city street, waterway, airway, and airport (except military), plus a reasonable return on the investment therein, and the equivalent of taxes thereon, should be paid by the users either in the form of fuel taxes or direct tolls.

The Fifth and Fourteenth Amendments to the Constitution prohibit depriving any person of property without due process of law by the United States or the several states respectively. It seems to me that American railroad stockholders are being deprived of their property without due process of law by the subsidization of the railroads' competitors. Why, then, has no stockholders' group filed a suit to prevent the spending of money on other forms of transport until enough has been received from user charges to provide the equivalent of taxes and a return on the investment? I am not a lawyer so perhaps my interpretation of the Constitution is wrong.

R. N. H.

[We agree completely with our correspondent, in principle. We do not believe the railroads should seek “hand-outs” from government—but, unless (1) favors to other agencies of transportation are curtailed or (2) the railroads are indemnified for the damage government is doing them, then it is going to be hard to keep the railroads from socialization.—EDITOR]

Instead of “Piggyback”

NEW YORK, N.Y.

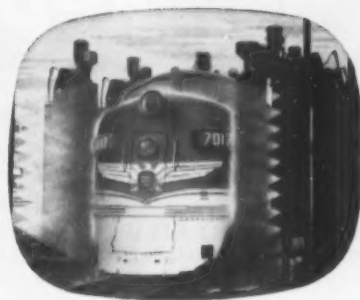
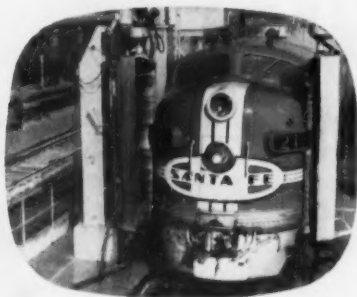
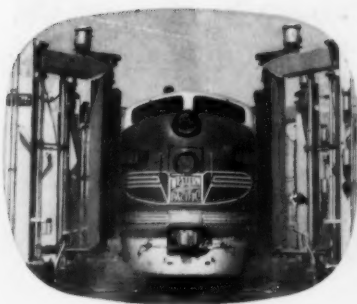
TO THE EDITOR:

Noting that several new designations have recently been suggested as a substitute for “Piggyback” or “T.O.F.C.,” I would like to propose one more, namely, “Rail Speedtrailer.”

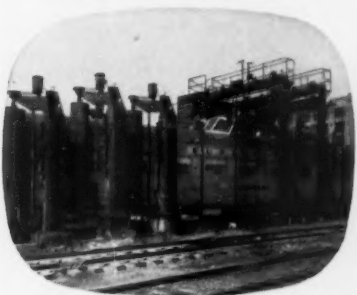
This definitely identifies the operation with railroads and carries the connotation of speedier trailer service by this means.

W. PELYO
Equipment Assistant
New York Air Brake Company

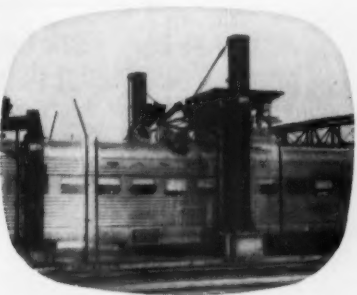
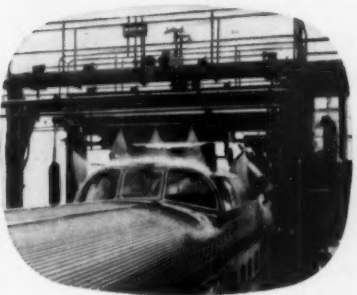
these crack streamliners



get their gleaming LUXURY LOOK in minutes...

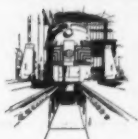


at the terminal or on the "run"—



with WHITING train washers

Other Whiting Railroad Products



Drop Tables



Electric Jacks



Read why Whiting Washers
do the best job at lower cost
in less time! Write now
for Bulletin CW-C-409.

WHITING CORPORATION

15603 Lathrop Ave., Harvey, Illinois

The Engineer's Report

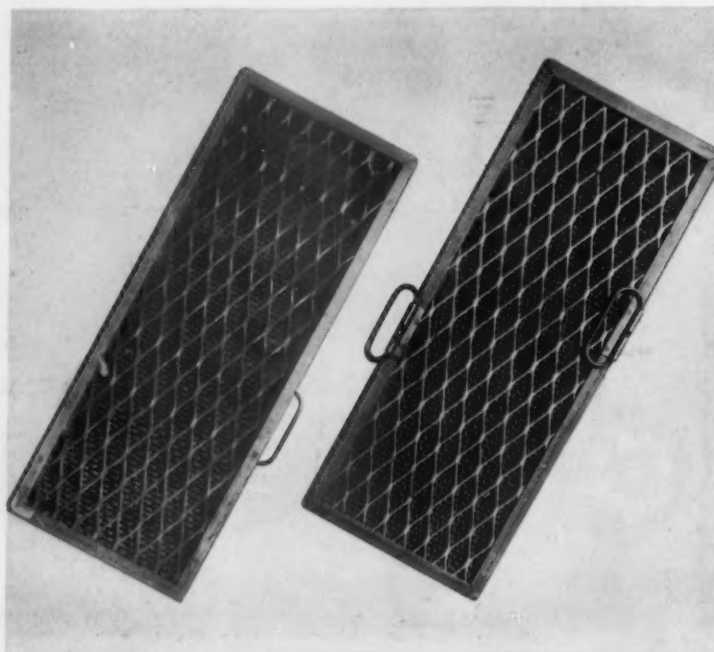
CASE HISTORY

PRODUCT *Calol Filter Coat*

Bamberger Railroad Co.,
FIRM *Salt Lake City, Utah*

Adhesive filter coating keeps dirt out of engines!

CALOL FILTER COAT prevents dirt from coming through air filters on the Bamberger Railroad Co.'s locomotives, even though heavy, salt-laden dust blows almost constantly along a portion of their Ogden to Salt Lake City right-of-way. Car-body filter at right shows dirt collected in only 30 days on this run. Interior side of same filter, far right, is clean, showing that dirt was trapped in the filter. With ordinary oil coatings, dirt got into engines and caused extra wear—engines had to be overhauled every year. "Since using Calol Filter Coat, none of our engines has been overhauled in a year and a half," says J. F. Buckley, Master Mechanic. "Inspections show much less wear on cylinders. Engine compartments stay so clean now that dust entering any tiny crack shows as a definite streak on the floor." No drip pans are used with Calol Filter Coat because it always stays in place. It increases the efficiency of all their impingement-type air filters.

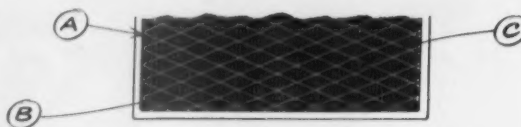


FREE CATALOG: "How to Save Money on Equipment Operation" will be sent on request to Standard Oil Company of California, 225 Bush St., San Francisco. FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your distributor, write or call any of the companies listed below.



TRADEMARK "CALOL" REG. U. S. PAT. OFF.

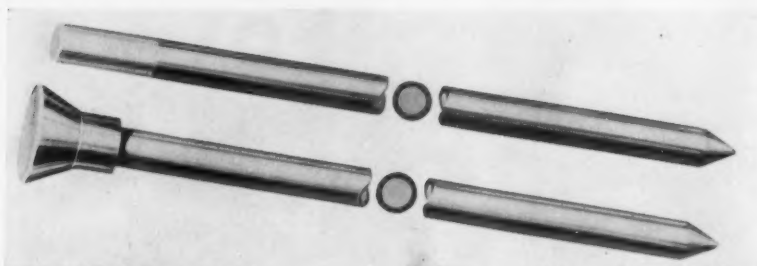
How Calol Filter Coat Ups Efficiency of all Impingement-type Air Filters



- A. Will not drip off or flow from screens—full amount applied remains over the entire service period with sustained high filtering efficiency at all ambient temperatures. Easily applied by conventional methods.
- B. Has high wicking ability—quickly soaks through dirt particles in all air velocities and extreme dust concentrations.
- C. No loss from contact with rain or snow, filters are easily cleaned with usual hot-water-detergent solutions.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

What's New in Products

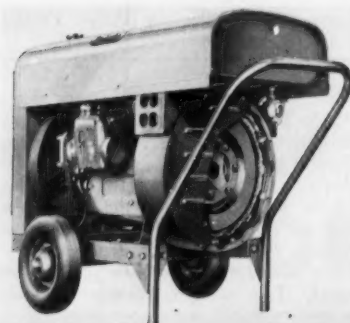


Non-Rusting Survey Marker

A survey marker, consisting of a steel core to which a copper covering has been molten-welded, has been announced by the Copperweld Steel Company, Pittsburgh. Designed for use in locating permanent survey points, the marker incorporates strength for driving and a non-rusting exterior.

The marker is available in two different types, one with a tinned-end extending down 1½-in. from the top,

and the other with a compression-fit 1½-in. diameter bronze head, which provides space for center-punching a precise point of reference. The former is available in ½-in. or ⅝-in. diameters, and is designed for use in uneven or heavy-foliaged terrain. The latter is supplied in a ⅝-in. diameter and can be driven flush with pavements, roadbeds, bridge buttresses or other surfaces. Standard length of the markers is 3 ft; however, other sizes can be furnished on special order •



For Hi-Cycle Tools

An engine-driven, 360-cycle electric generator, which can be moved about to any needed location in shop or yard for supplying power to high-frequency tools, is now available from Waukesha Motor Company, Waukesha, Wis.

The generator is a 10-kva (8-kw) 220-volt, 3-phase, 360-cycle machine, direct-driven from the engine. It also supplies 1,500 watts of 115-volt d-c power for the operation of lights and universal tools using commutator-type rotors.

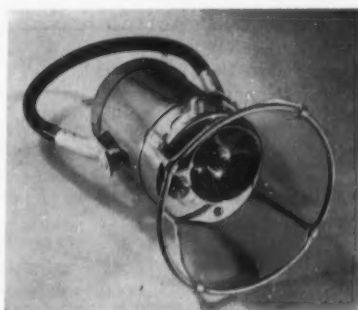
The rotor of the generator is cast aluminum with permanent magnets, mounted on ball bearings supported by a quill from the engine crankcase, and driven through a flexible steel disc coupling.

The 4-cylinder, 4-cycle engine has 2½-in. bore and a 3⅞-in. stroke, and runs at 2,160 rpm. It has cast alumi-

num head, crankcase, gear cover and intake manifold. The cylinder block is cast iron with Stellite inserts and Stellite-faced valves.

It is equipped with a built-in combination governor and coolant pump for forced circulation. The engine has magneto ignition, and a self-recoiling rope starter.

The set is mounted on a wheel-barrow type steel chassis with semi-pneumatic rubber tired wheels. Its total weight is 395 lb •

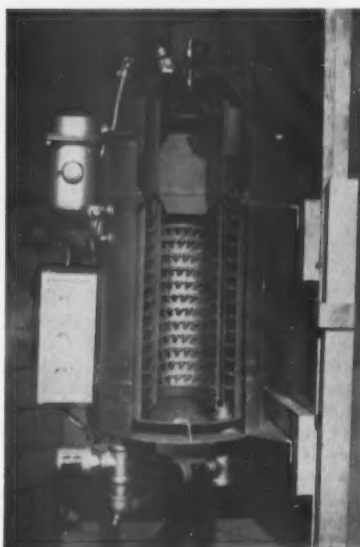


Trainman's Lantern

The Star Headlight & Lantern Co., Honeoye Falls, N. Y., has announced a new dual-purpose trainman's lantern, Star Model 202-S. Improved features claimed for it are: (1) The twin bulbs can be used either for spotting or signaling; (2) the spot light produces

a pin-point spot with no dark circles; (3) sockets are nylon insulated, and (4) the switch is positive-acting and completely waterproof. The wire guard is extra rigid, and the unbreakable, sure-locking insulated handle is shaped for uniform balance with quick and easy access to the switch knob.

The new lantern is drawn in one piece from zinc-coated steel and finished in blue enamel for additional rust protection. The reflector is formed of Armco stainless steel •



Diesel Standby Heater

Improvements have been made to the Vapor Heating Corporation's No. 4915 (Watchman) water heater which keeps engines and lubricating oil warm overnight or between runs when the locomotives are not being used. The principal improvement is the addition of a motor that operates either off the locomotive batteries or 110-volt alternating current from a convenient outlet. Current from the track outlet charges the batteries, rather than running them down to operate the heater. Under such conditions the d-c end of the motor becomes a generator and supplies d-c power to operate the controls and give a 4 or 5 amp trickle charge to the batteries at 74 volts d-c.

The Watchman heater puts out 125,000 Btu per hr at 80 per cent efficiency when full on, using a fuel nozzle with a capacity of 1.25 gal per hr. However in normal winter weather the heater usually burns fuel less than half the time, which means the unit is consuming less than ¾ gal per hr.

The heater is also available with 220-volt a-c motors, d-c motors or gas-

More New Products

oline engines for use as portable units. Fuel may be either diesel fuel oil, gasoline or propane gas. All models include an alarm bell circuit to notify the shop man if the unit is not working properly •



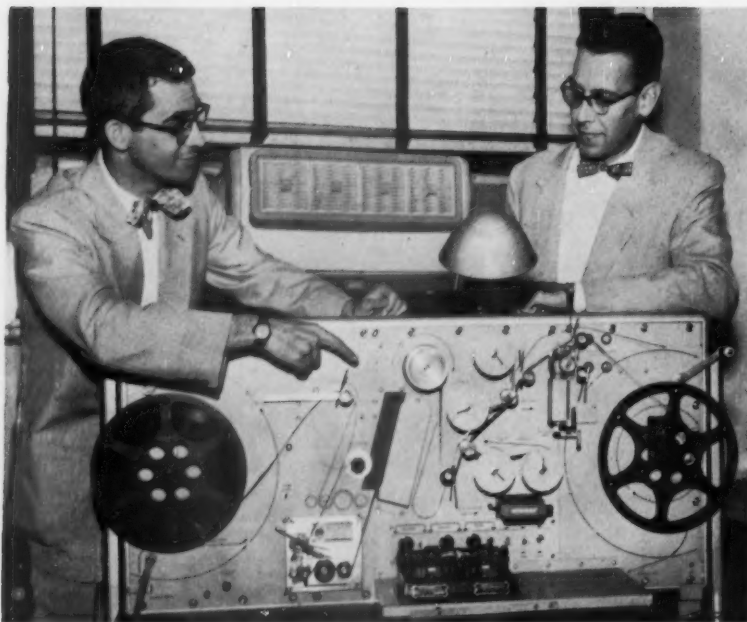
Ball Locking Padlocks

Ball locking padlocks manufactured by Junkunc Brothers, 1145 W. Garfield blvd., Chicago 21, use two hardened steel balls held securely in position by a solid grooved rotating bar that cannot be released until the double bitted key is inserted in the lock. This ball locking design is said to prevent unauthorized opening of these locks, because they are made of hardened steel shackles and solid hardened steel bodies, eliminating use of rivets and pins. The locks, which are said to meet railroad requirements, are available in a wide selection of sizes in steel, brass and die cast bodies •



Movie Projector for Rough, Heavy Service

A new model 16-mm motion picture sound projector designed for heavy usage and also to withstand unusual



THE SANTA FE HAS ACQUIRED this machine which uses electronic principles to check 16-mm motion picture film for physical defects. Here William Cox, manager of the road's film bureau at Chicago, discusses operation of the Inspect-O-Matic with Arthur Bach, vice-president of the manufacturer—Harwald Company, 1216 Chicago ave., Evanston,

Ill. The machine checks film at speeds in excess of 400 feet per minute yet it stops automatically to permit repair upon discovery of any of several types of defects. It is said to produce marked savings in both labor and film replacement footage while practically eliminating film failures during projection. A similar machine has been acquired by the Union Pacific.

vibration and shock has been announced by Bell & Howell Co., 7100 McCormick road, Chicago 45. Known as the JAN (joint Army-Navy) because it was designed to operate under rigorous military conditions, the machine is said to have a life span two to three times that of the average projector. It weighs 45 pounds and is self-contained in a single unit. It throws 500 lumens of light on the screen as compared to 200 to 300 for

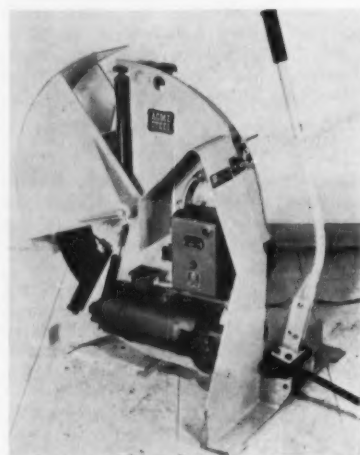
standard commercial projectors. Each of the major components is built as a self-contained unit thus permitting future changes and improvements in design to be incorporated the machine by substituting the new component for the old—a construction which also simplifies servicing. For long wear, sapphire film guides are used. The machine comes equipped with a 5-inch loudspeaker built in the case and a 2-inch f/1.6 lens •

Power-Driven Unit-Load Band Dispenser

A new power-operated band dispenser (right) which facilitates cutting heavy-duty steel strapping to length, has been developed by Acme Steel Company, Chicago.

The dispenser, Model E24AO, is expected to prove especially valuable to large volume users, because it feeds band from a coil at 250 ft per minute. The operator need only move a single lever to feed and cut the desired length of strapping. A magnetic brake prevents strap over-run, and blades can be resharpened on a surface grinder.

The motor requires either 220- or 440-volt, 3-phase, 60-cycle current, and the dispenser holds 3/4-in., 1 1/4-in. or 2-in. Unit-Load Band •



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and production of Cast Steel

DRAFT YOKES

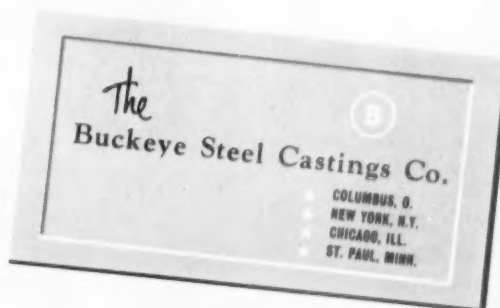


Standard practice at Buckeye is to thoroughly gauge all yokes to meet the rigid A.A.R. tolerances. All Buckeye A.A.R. yokes meet design test specifications M-205-53.

Nearly a half century of producing Draft Yokes adds up to a lot of experience. Add consistent accuracy and you get Buckeye dependability. Dependability that is found in all Buckeye Draft Yokes . . as well as their many other products for railroads in Grade "B" or High Tensile Cast Steel.

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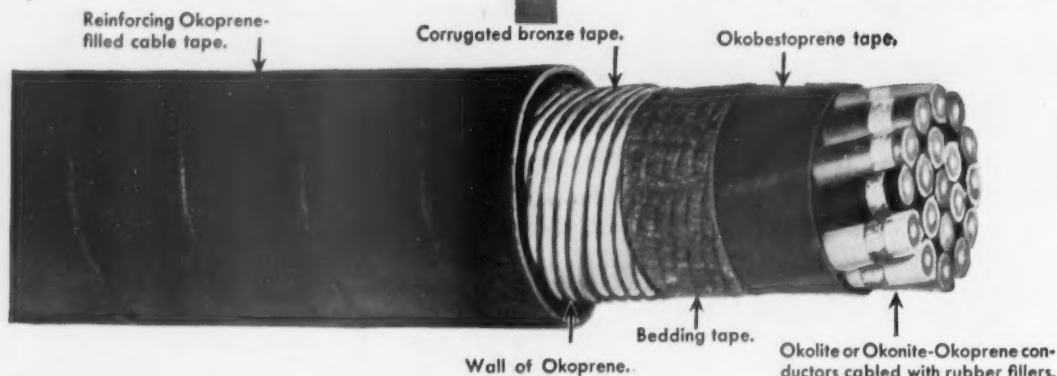
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New!

OKONITE CB-OT C A B L E

for direct burial installations



CB-OT is a light-weight, metallic-tape armored protective covering designed to sheath multi-conductor signal, control and power cables directly buried in the earth. It consists of a 5-mil corrugated bronze tape and a wall of Okoprene reinforced with an Okoprene-filled cable tape.

The corrugated bronze tape provides extra strength in the composite sheath. The corrugations give exceptionally high compressive strength which is a prime consideration in direct burial applications. It constitutes an excellent termite and insect barrier and provides mechanical protection against attack by gophers, rodents and small animals. It contributes to the moisture resistance of the cable and prolongs its life in underground service.

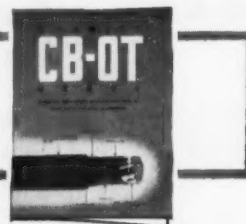
This light-weight construction is much more flexible than the conventional metallic type parkway finish.

Unlike flat-taped constructions, this design can be bent around a radius close to that of its own diameter without buckling the metal tape and causing damage to the insulation.

At terminations the corrugated bronze tape is easily unwrapped. The small bending radius enables CB-OT sheathed cables to be trained in congested junction boxes or relay cases and allows simple terminations where space is restricted.

For prices or more detailed information contact The Okonite Company, Passaic, New Jersey.

Write for Bulletin 1086 for more complete information.



OKONITE OKONITE SINCE 1878 **insulated cables**

2650

"Cold War" Against Railroad Socialization

Recent British diplomacy has puzzled many Americans. Apparent emphasis on appeasing the Communists—the same conduct which aroused derision when practiced by Chamberlain with Hitler—has been hard to understand. George Sokolsky, the able newspaper columnist, has come forward with a persuasive explanation. Atomic weapons, he points out, make it possible to knock out such a small country in a single attack. Hence, says Mr. Sokolsky, realism has forced the British to work for peace at almost any price. Survival must be the primary goal of such a nation's diplomacy. "The practical statesman deals with what faces him today."

Doesn't the practical railroad man, also, have to do the same thing? The situation that faces railroad leadership in this country certainly has some parallels with that which confronts British statesmen. The railroads here—as private enterprise—are in as much economic peril as Britain is militarily. In both cases, when survival is the issue, responsible leadership has to concentrate on the attainment of that objective, even if to the temporary neglect of goals which are ordinarily considered more admirable.

The justification for diplomacy that temporizes with Communism is that the diplomats believe Communism has internal weaknesses which condemn it to a relatively early death. Why run the terrible risk of war with an institution that cannot long survive, anyhow? If statesmen did not believe this, then temporizing would not be honorable.

It all depends on how much faith you have in the inner strength and "survival value" of Western civilization—and, on the other hand, how much vitality you ascribe to Communism.

In the opinion of this paper, there is very little basic difference between Communism and Socialism. Socialism is merely Communism—bathed, shaved, and with a clean suit of clothes. We have no more belief in the long-run ability of Socialism to win a permanent victory over economic freedom than we have that Communism is destined to overwhelm the free world. The greatest danger to economic freedom, as we see it, is that its advocates may risk their economic lives by refusing to accept conditions necessary to survival,

during the brief time when Socialist practices remain popular. It is a counsel of prudence, in dealing with such an adversary, to have a showdown with him—not while he has everybody fooled, but when he begins to fall apart.

If the time-biding strategy of "cold" war—with constant effort to prevent its becoming "hot"—is sound national strategy in confronting Communism, then a parallel "cold war" against Socialism on the domestic front is equally defensible. The justification for the strategy is the promise it holds for the survival of some friends of economic freedom until Socialism's built-in cancer begins to show its fatal symptoms.

The railroads are the largest—and virtually the only—citadel of anti-socialism left in American industry. As such, in our fallible opinion, railroad leadership's main duty has become that of insuring the industry's survival as private enterprise. This assurance cannot be given if the industry is going to continue to engage in a long list of such uncompensated philanthropies as (1) providing highly taxed commuter service; (2) continuing to pay property taxes while parallel property used for exactly the same purpose pays none; (3) maintaining, for free, billions of dollars of stand-by transportation plant, needed for national defense emergencies; (4) hauling that part of the mail where payments don't equal costs, while relinquishing that part where payments exceed costs; (5) financing plant improvement by tax-paying securities while tax-exempt bonds finance parallel transportation property. Neither can the railroads survive as private enterprise if they continue to be restrained by rigid and detailed regulation while they are surrounded with unfettered competitors.

The inherent economic superiority of railroad service has enabled the railroads to survive, thus far, in spite of all these handicaps—but there is a limit to what mere merit can accomplish in the face of competition from an unlimited public treasury. The railroads do not need to seek hand-outs. They *do* need to insist that their philanthropies, whether voluntary or involuntary, be curtailed—and that they be compensated for services to government, just as they are compensated for services to private patrons. Government must free them to compete for traffic which they can handle more economically than other carriers.

If railroad leadership can succeed in getting from government only a modest fraction of the concessions to which the industry is, in justice, entitled—then railroads can quickly reverse their present depressed condition, turning it into one of dynamic growth and prosperity.



Quebec, North Shore & Labrador

- Why It Was Needed
- How It Was Built
- How It Is Operated
- What Is Its Future?

By **GARDNER C. HUDSON** and **JOHN H. DUNN**

News and Financial Editor

Signaling and Communications Editor



A SPECIAL REPORT on the world's newest and most modern heavy-duty railroad, now being thoroughly tested, in preparation for its yearly job of hauling 10 million tons of ore

Iron ore is rolling—from the world's oldest hills over the world's newest railroad.

That railroad—the Quebec, North Shore & Labrador—has met its goal of “Iron ore by '54”; and in so doing has opened up to the hungry steel mills of Canada and the United States the hitherto untapped reserves of high-grade ore which have lain for countless ages in the primeval wilderness where Labrador joins Quebec.

1954—A Year of Test

The railroad, to be sure, is not “finished,” even in the limited sense in which any railroad can ever be described as “finished.” It has not yet officially assumed the com-

mon carrier status which it will eventually have; its movement of ore is not yet on a commercial basis; a good many details and refinements of construction remain to be completed, this year or in a few years to come.

Men on the ground describe 1954 as “a year of test, of tryout, of break-in.” But the system *is* an operating entity. Up to late afternoon on September 28 it had moved 163 trains of ore over the 356 rail-miles between the mines surrounding Schefferville and tidewater docks at Seven Islands; and there is no longer any doubt as to the railroad's ability to meet—and meet successfully—the goal which its designers, its builders, and its operators have set for it.

The Why and the Wherefore

The ore bodies which the new railroad is built to serve lie almost at the midpoint of that great peninsula of northeastern Canada which is bounded on the north by Hudson Strait, on the east by the Atlantic Ocean, on the south by the Gulf of St. Lawrence, and on the west by Hudson Bay.

Geologically, the area is part of the so-called “Laurentian Shield,” which is believed to be “the oldest land on earth,” with an estimated age in excess of 600 million years. Politically, it is part of the Canadian province of Quebec and of the Labrador, or mainland, portion of the province of Newfoundland.

The ore deposits themselves, relatively small in sur-

face area and relatively shallow in depth, lie “like raisins in a fruitcake”—or “almonds in a chocolate bar”—astride the provincial boundary.

Existence of iron ore in the area had been suspected ever since the great Canadian geologist, Dr. A. P. Low, exploring the territory by foot, canoe and dogsled in the 1890's, pointed out that the rock formations appeared favorable for iron exploration.

The needed impetus for intensive prospecting in this remote Canadian wilderness did not develop, however, until the early 1940's. By that time, far-seeing American steel men had begun to realize that they could not count on living forever off the high-grade, direct ship-

Special Report: The QNS&L

ping ores of Minnesota's Mesabi range. For more than half a century that range had supplied three-quarters or more of the steel needs of an expanding nation, and had furnished the bulk of its armaments for two world wars—which hastened the range's inevitable end. Necessarily, therefore, steel companies began to look for new sources of ore. Some went as far afield as Venezuela and Liberia. Others are resorting, with every evidence of success, to extraction of usable ore from taconite rock, of which the Mesabi still has a vast supply, but which, until very recently, has been commercially unusable.

Under such circumstances, with the Mesabi's supply of high-grade direct shipping ore approaching exhaustion

in what is believed to be a relatively short period, it would have been folly to bypass the Quebec-Labrador fields. Accordingly, a combination of interests, headed in the United States by the M. A. Hanna Company, and in Canada by Hollinger Consolidated Gold Mines, Ltd., joined forces to explore the Quebec-Labrador ore fields, and to make their resources available to both countries.

To date, prospecting has resulted in "proving" the existence of some 417 million tons of high-grade ore, of from 50 to 60% iron content, comparable to that on the Mesabi, and so located as to be economically mined.

It was the result of these explorations that led directly, under leadership of the same group of companies, to construction of the now nearly completed 356-mile Quebec, North Shore & Labrador Railway.

A Railroad Is Built

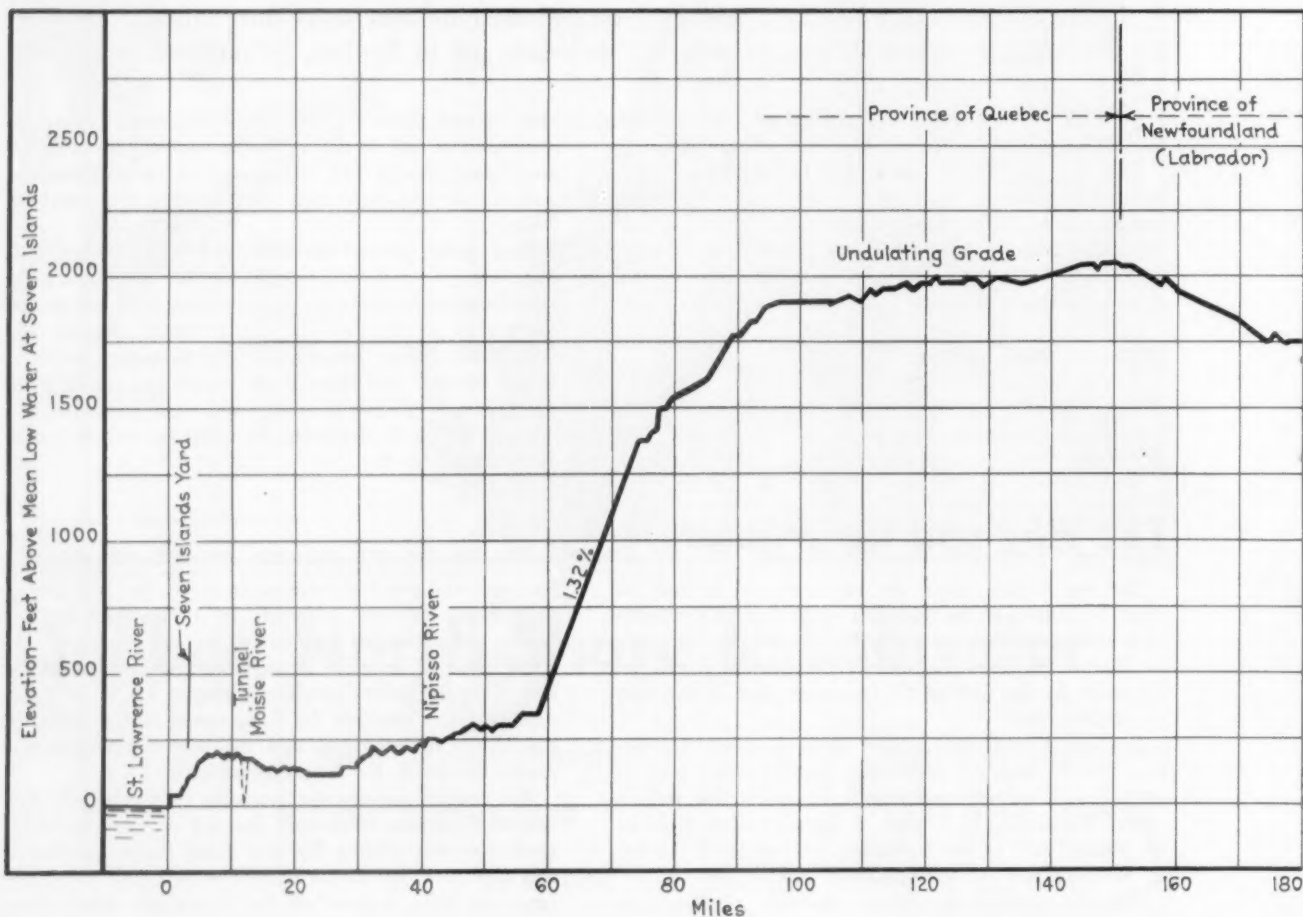
Surveyed . . .

The obvious northern terminus of the new railroad was some point close to the center of the proved ore deposits—either near Burnt Creek, site of one of the

early prospecting centers, or at closely adjacent Knob Lake, soon to be the site of a new mining town which the premier of Quebec province has officially designated as Schefferville.

Equally obvious as the southern terminus was the

THE QNS&L—IN PROFILE . . .



little 1,000-person fishing village of Seven Islands, on the north shore of the Gulf of St. Lawrence, some 320 air-miles almost due south of Knob Lake, and some 484 air-miles (and just about the same number of river miles) northeast of Montreal—present head of large ship navigation on the St. Lawrence river.

Beside those basic advantages of location—Seven Islands—Sept Isles to the French Canadian—is blessed with one of the best natural harbors on the north shore of the St. Lawrence—an almost completely landlocked bay, its entrance guarded by “six islands and a reef,” between which run three channels navigable at all tides and in nearly all weathers.

With terminal points so clearly indicated, reconnaissance surveys of the proposed railroad were run in 1945 and 1946, followed by an aerial survey, and by the running, in 1947-1949, of preliminary lines. Final location surveys were begun in the latter year and completed in 1952; a total of 1,507 miles of survey line were run.

Meantime, concurrent economic studies had determined that the most economical operating results would be achieved by running loaded trains of about 14,000 gross tons at a maximum speed of 40 mph, with empty trains of comparable length to be run at 50 mph (less on heavy grades and sharp curves). The surveys, ac-

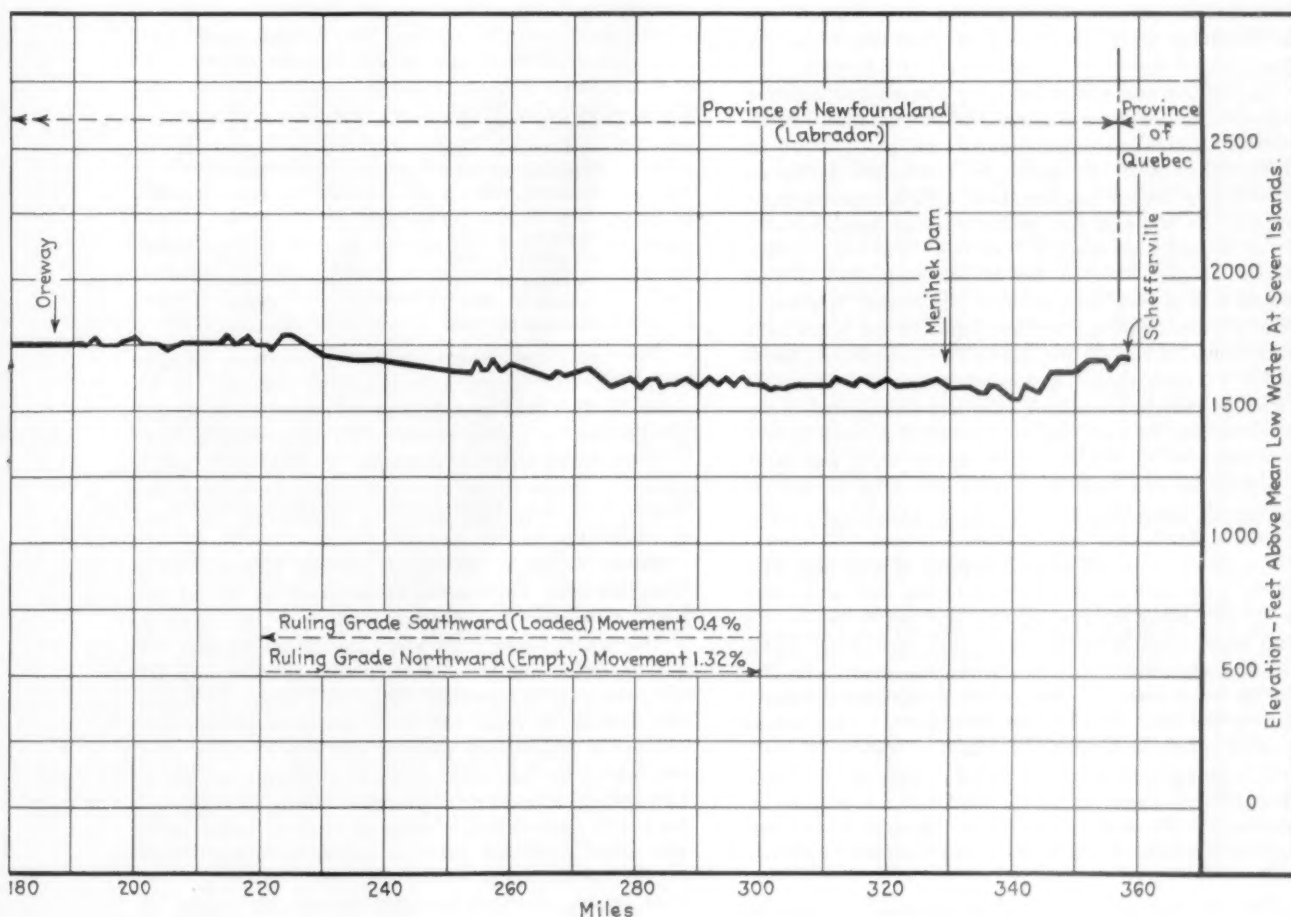
cordingly, were directed toward laying out a line which would permit such operations.

The resulting line is a little over 356 miles long—a total deviation of only 36 miles, or a bit more than 10%, from the 320-mile air-line distance between terminals. Maximum elevation is 2,066 ft; ruling grades, compensated for curvature, are 0.4% against loaded southbound trains and 1.32% against northbound empties.

The line as thus established follows generally the natural drainage pattern of the country. It crosses a narrow coastal plain just north of Seven Islands; rises into the coastal highlands along the valleys of the Moisie, Nipisso and Wacouno rivers to MP 130; follows the Magpie river to the height of land near MP 150; there enters the Labrador plateau, and runs along Ashuanipi and Menihék lakes to MP 330, where it crosses Menihék dam; and finally follows the so-called Labrador trough to its northern terminus at Schefferville (Knob Lake) at MP 356.

... And Built

Even before final surveys were complete, construction contracts were awarded, in the summer of 1950, to a combination of four of the largest companies of





HEAVY ROCK CUTS—and breath-taking scenery—mark the QNS&L's first 150 miles.

their type in Canada—Cartier Construction, Ltd.; McNamara Construction Company; Mannix, Ltd.; and Morrison-Knudson Company of Canada.

Work began at once.

In October 1950, small bulldozers, trucks and other construction tools arrived by boat at Seven Islands, and in November work was begun on what was to be the line's longest tunnel, 11½ miles north of tidewater.

In that fall and winter land was cleared and building begun on a base camp at Seven Islands; the future Seven Islands terminal yard was cleared and graded; two or three sidings were laid down; and work was started on what is now the ore loading dock at Pointe-aux-Basques, adjacent to and just east of the town of Seven Islands. From the new base camp, a "tote road" was built to Mile 17 on the west side of the Moisie river, and carried across that stream on a wooden pile trestle, finished in March 1951. Grading was then begun in the heavy rock cuts above and along the Moisie both north and south of MP 17, using shovels and other equipment delivered to Seven Islands in the fall of 1950 and transported to the work site via the tote road and trestle. That road in turn was extended to MP 28, where an air strip was built.

By spring and summer of 1951 air strips capable of taking all types of planes had been established at Wacouna, at Knob Lake, and at other locations—14 in all—on or closely adjacent to the proposed railway line. Tote roads were built from air strips to the line, and north and south along it; and grading was begun both north and south from Wacouna, and south from Knob Lake. Grading equipment, in many cases, was flown in to Wacouna, Knob Lake, or other points, by Hollinger Ungava Transport, Ltd., in what has been termed "the largest civilian airlift in history"—a major operation in itself, which between October 1950 and December 31, 1953, flew 138,700 passengers, 170,343,000 lb of freight (including 190,000 bags of cement for Menihek Dam), and ran up 15,623,190 ton-miles in 15 airplanes and two helicopters.

Railway material also was transported, in winter, by

truck and tractor trains and by dog sled; and, in summer, on the northern lakes and rivers, by 44-ft 4-ton boats.

Track laying followed closely upon completion of grading, completion dates for the various segments being as follows:

Date	Mileage at End of Steel
October 1951	9.0
June 13, 1952	12.0
July 13, 1952	19.1
September 27, 1952	66.0
November 30, 1952	108.2
March 31, 1953	130.0
June 30, 1953	152.0
September 1, 1953	202.0
November 1, 1953	268.0
December 20, 1953	325.0
January 1, 1954	332.0
February 19, 1954	Knob Lake

The traditional "golden spike," symbolizing completion of the line, was actually driven on February 13, by Jules R. Timmins, president of Hollinger Consolidated Gold Mines, in a temperature of 20 degrees below zero.

Track-laying methods, developed on the QNS&L, which permitted crews to put down, at times, more than two miles a day, were fully described in *Railway Age* April 6, 1953, page 72.

Rock—Principal headaches for the builders—aside from the cold, which sank, on occasion, to 30, 40 and even 50 degrees below zero—were rock and muskeg.

The heaviest rock work was encountered between MP 10, where the line leaves the flat coastal plain, and MP 150, where, at its maximum elevation, it enters the Labrador plateau. In those 138 miles are the new railroad's two major engineering projects and also its finest scenery, where the line clings to rock-cut shelves in canyon-like valleys, or runs through dense forests of evergreen, birch and aspen—always along or close to rivers which flow deep, dark and quiet, or tumble brawlingly down rapids and waterfalls—one a sheer drop of 175 ft.

Muskeg—North of MP 150, on the other hand, the

SOME QNS&L "FIRSTS"

New—and even still “unfinished”—as it is, the QNS&L already has some interesting “firsts” to its credit. Among them are:

- First railroad in Labrador;
- First railroad to use exclusively roller-bearing freight cars;
- First railroad to use a yard designed for use exclusively by roller-bearing cars; and—probably—
- First railroad, at least of comparable size, to be “tailor-made” with optimum train lengths, weights and speeds determined first, and grades and curves then “cut to fit.”

In addition to these distinctions, the QNS&L expects, under full operation, to run the heaviest trains consistently operated on any railroad; to have the lowest known ton-mile costs (though they are not yet determined); and to set new records in gross ton-miles per train-hour. The latter figure—with 14,000-ton loaded trains traveling 40 mph—might well reach the astronomical total of 560,000!

ground, instead of being rough and rocky, is low and wet; roughly 50% of the entire area is water—lakes, rivers or muskeg swamp. Muskeg, in fact, was encountered on more than 60 of the railroad's 356 miles, principally between MP 160 and MP 220. Its average depth was about four feet, and the roadbed was laid across it by end-dumping local sand and gravel taken from nearby borrow pits. Despite the amount of fill thus consumed, and despite efforts to provide adequate drainage, it is expected that track laid across such muskeg swamps will continue to settle for some two or three years to come.

Drainage—Even where there is no actual muskeg, drainage is a problem on the northern half of the line, where the advent of each spring season is expected to bring a runoff from an average four feet of snow, closely followed by the thawing of ground frozen during the winters to depths of anywhere from 18 in. to four feet.

Grading—To mid-July of this year, construction of the line had required the moving of 2,106,423 cu yd of solid rock and 13,638,694 cu yd of other material, and the placing of 2,283,771 cu yd of ballast and train fill. Construction equipment used included 57 diesel shovels and draglines; 84 tractors, dozers and scrapers; and 160 dump trucks.

Ballasting—Much more material will have to be moved, however, before the line can be considered as “finished.” Ballasting, for example, is still in progress, from seven “ballast residencies,” each responsible for about 50 miles of line. At present, local pit-run gravel is being used; but if future studies prove the change to be economically desirable, this will eventually become subballast, to be topped with rock.

Ballasting is fully mechanized, with five Pullman-Standard, one Electro-gang, and one McWilliams production tampers in current use. Also assigned to this work are five spreaders, 175 hopper ballast cars, and 58 air-dump cars. The ballast cars are AAR standard, with Enterprise doors, specially designed for the QNS&L, permitting either center or side dumping. Some of the methods used in ballasting, particularly during cold

weather, were described in *Railway Age* March 29, page 20, and in the April *Railway Track & Structures*.

Physical Characteristics—As it now stands, the single-track line is 356.7 miles in length. Of this, 214 miles, or 60%, are tangent; 140 miles, or 40%, are on curves. All told, there are 700 separate curves, up to a maximum of 8 deg, and a total of 15,924 degrees of central angle. The northbound 1.32% ruling grade is the longest on the line—16.5 miles between MP 57 and MP 73.5.

There are 23 sidings or passing tracks, with a total length of 24.3 miles. Each has a capacity of 135 ore cars, plus a three-unit diesel locomotive and a caboose. Turnouts to sidings are No. 12, with 22½-ft points.

Track Structure—All main-line track is laid with new 132-lb rail of standard RE section; sidings and yards have new 100-lb rail of AAR section; and secondary and back tracks are of 85-lb rail which is the Canadian Pacific's standard 5-in. base modification of ASCE standard section.

Main-line ties are of Texas hardwoods and British Columbia fir, 8 ft long, laid 24 to a 39-ft rail panel, and fully creosoted. They were treated, bored and adzed prior to shipment to Seven Islands, where they arrived banded in bundles of 50. Ties in sidings, yards and other secondary tracks are of untreated native timber.

All track is fully tie-plated and anchored, anchors being placed generally 16 to a 39-ft panel (eight to a rail). On 40 miles of grades, however, anchors are used in the ratio of 24 to a panel, or 12 to a rail. Six-hole joint bars are used on the main line, and four-hole bars elsewhere.

Yards and Terminals

The railroad has only one point which it designates as a yard—Oreway, at MP 186; but its trains operate by agreement into terminals of the Iron Ore Company of Canada at Seven Islands, Silver Lake, Ruth Lake and Gagnon. Emphasizing the still “unfinished” character of the railroad—and of the entire project—is the fact that all these facilities have been so designed as to allow ample room for expansion when and if ore production warrants.

Most important terminal is the IOCC's hump-retarder facility at Seven Islands, which presently consists of four receiving tracks with a capacity of about 125 cars each; eight classification tracks holding 95 cars each; and

“INDUSTRY CONSCIOUS”

In its design, construction, equipment and operation, the QNS&L has “borrowed heavily” on the knowledge, experience, and even the personnel, of other Canadian and United States railroads. As a result, although it has no physical connection with any other line, its officers feel that it is definitely a part of the railway industry. They are highly “industry conscious.”

They propose, for example, to run, at the earliest possible date, full tests on the performance of their roller-bearing, rubber-draft-gear equipped ore cars, and to make the results of those tests generally available.

Special Report: The QNS&L

four "empty" tracks, each of which can accommodate 125 cars. A fifth track in the receiving yard is kept as a running track. There are, in addition, a number of storage and rip tracks; tracks serving the ore stockpile area; and a 180-deg retarder-equipped loop track between the car dumper and the "empty" yard. Operation of this yard is explained in detail beginning on page 55.

The railroad's own Oreway yard is at the operating midpoint, and the approximate geographic midpoint, of the main line. At present, it has two sidings, a rip track, and a wye.

The IOCC's Silver Lake yard, just below the northern end of the QNS&L line at Schefferville, consists of five tracks, a rip track, and a wye. Flat-switched, it is used

for breaking up trains of empty cars for distribution to mine spurs, and for assembling loaded cars from mine spurs into full trains for southward movement.

The IOCC's Ruth Lake and Gagnon yards—actually little more than sidings—are located at the ends of spurs serving the three mines which are now in operation.

Bridges, Tunnels and Culverts—There are 17 bridges totaling 4,179 ft in length; two tunnels, aggregating 2,957 ft; and a total of 93,203 ft of culverts.

The longer tunnel and the biggest bridge are located, respectively, at MP 11.5 and MP 11.8—so close together that it is literally possible for a single car to be in the tunnel and on the bridge at the same time. That bridge, 707 ft long and 155 ft high, carries the railroad across the turbulent Moisie river, and the two structures together mark the beginning of its climb into the Laurentian highlands.

A Railroad Is Equipped

Locomotives

Except for two second-hand steam locomotives, used principally during construction, and now stored at Seven Islands, motive power used by the QNS&L is all diesel. At this time it includes 22 1,500-hp General Motors general-purpose units (GP-7's), built by General Motors Diesel, Ltd.; 10 1,750-hp GP-9's, also built by General Motors Diesel, Ltd.; two 1,600-hp Alco type road-switchers, built by Montreal Locomotive Works; and two 600-hp yard switchers built by the General Electric Company. Enough additional units are now on order from General Motors Diesel, Ltd., to bring the total motive power roster up to approximately 50 road units by the time operation gets into full swing.

The larger diesel units are used interchangeably, as required. The two small GE switchers are used principally in humping operations at Seven Islands, though road units also may be used for that purpose.

All road locomotives are equipped with multiple-unit controls, dynamic braking and swing bolsters, but have no special modifications for cold-weather operation. Most of them are painted in the road's official colors—gray, orange and yellow.

Cars

Ore—By far the largest portion of the railroad's car fleet consists of specially designed roller-bearing ore cars, which, however, are actually owned by the QNS&L's par-

ORE CARS (Special Features)

Couplers—"F" type, to facilitate operation of long, extra heavy trains over rolling terrain, and to insure two cars staying coupled when upside down in the tandem rotary car dumper. Manufactured by National Malleable & Steel Castings Co.

Journal bearings—Tapered roller type, grease lubricated. Manufactured by Timken Roller Bearing Company.

Trucks—American Steel Foundries "ride-control" type, manufactured by Canadian Car & Foundry Co.

Truck frames—Cast steel jaw type, lengthened to accommodate 36-in. diameter wheels.

Wheels—36-in. diameter, multiple-wear steel; 75% of the wheels are untreated, and 25% are rim toughened, to compare the merits of the two types. The large diameter wheel was selected to reduce the unit loading to 870 lb per inch of wheel diameter. Three-quarters of the wheels were manufactured by the Armco Steel Corporation, and the balance by the United States Steel Corporation.

Axles—6½-in. by 12-in., to AAR Spec. M-126-Grade F, without black collar, smooth turned all over, and double heat treated. Wheel seat diameters have been increased to 8¾ in. and the diameter at the center of the body to 7¾ in., from the standard AAR 6½-in. by 12-in. axle.

Springs—2½-in. travel.

Brakes—Westinghouse Air Brake Company "empty and load" type, consisting of a single 7 5/8-in.—12-in. by 9-in. brake cylinder, with a 12-to-1 leverage ratio, to provide braking ratios of 27% loaded and 48% empty. A manual changeover control valve has been provided because the cars are to be confined to a single service, and not offered in interchange.

Brake shoes—Double-clasp shoes on each wheel, to reduce brake beam and shoe loading, and permit 12-to-1 leverage ratio with single brake cylinder.

Center sills—AAR Z-26.

Bolsters—Cast steel, with built-in American Steel Foundries A-3 ride-control device.

Draft gear—On 940 cars, standard, furnished by Cardwell Westinghouse Company and W. H. Miner, Inc. On 260 cars, rubber draft gear, furnished by National Malleable & Steel Castings Co. (125 sets); Waugh Equipment Company (125 sets); and W. H. Miner, Inc. (10 sets).

Pusher pads—Special extra-heavy pusher pads are fitted at all four exterior corners of each car, as a bearing for the sidearm pusher locomotives which shove loaded cars, two at a time, up to the dumper house at Seven Islands yard.

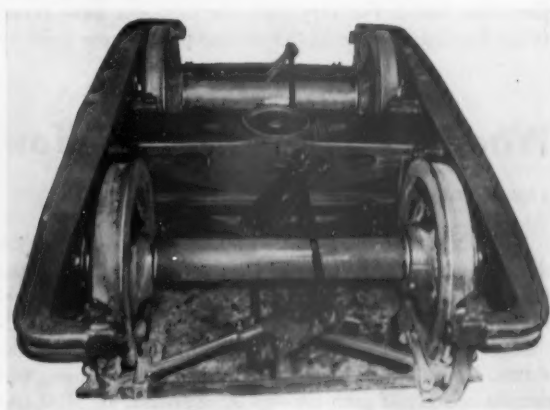
"Scotchlighting"—Car numbers and light weights are in "Scotchlight" reflecting tape, for guidance of scale and retarder operators and other yard personnel in night switching.



THE 1,200 ORE CARS built by the Pullman-Standard Car Manufacturing Company for the Iron Ore Company of Canada, for service on the QNS&L, incorporate many special design features.



"SCOTCHLIGHT" reflecting tape is used for car numbers and light weights, to facilitate night switching.



THE CARS' "ride-control" trucks are designed for roller bearings, extra-heavy axles, and 36-in. steel wheels.

ent concern, the Iron Ore Company of Canada. The present fleet of these cars numbers 1,200 units, with 800 more of similar design now on order for delivery by or before the beginning of the 1955 ore shipping season. The 1,200 ore cars were built by the Pullman-Standard Car Manufacturing Company at Butler, Pa., but many of their parts were fabricated in Canada.

Designed for sturdiness and economy of operation, and maximum possible freedom from maintenance, the ore cars are planned to carry the largest possible load (251,000 lb gross) within the limits of 6½-in. by 12-in. axles and two four-wheel trucks.

They are solid-bottom gondolas, all welded, with outside stakes and sloping sides and ends, smooth on the inside, to facilitate rapid clearing of ore when the cars are rotated in the tandem rotary car dumper at Seven Islands. Since unloading is exclusively by dumper, no bottom doors are needed.

Dimensions, weights and capacities of the cars are shown in the table at the right, while other special features of design are outlined on page 50.

Other Cars—Other freight cars presently in service,

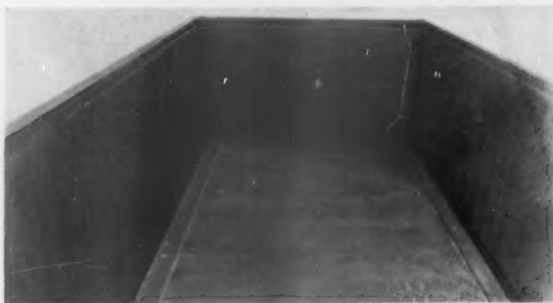
ORE CARS— Dimensions, Weights and Capacities

	Ft	In.
Length between pulling faces	34	0
Length over striking castings	31	5 1/2
Length between truck centers	20	6 *
Length inside top	29	1 3/8
Length inside bottom	27	11 3/4
Wheelbase	5	10
Width, overall	10	5 13/16
Width inside top	9	7 1/4
Width inside bottom	8	5 3/8
Height, overall, from top of rail	8	8 1/16
Height inside	5	0
Cubic capacity, level full**		1,283 cu ft
Cubic capacity with 16% heap**		1,490 cu ft
Light weight		54,600 lb
Load limit		196,000 lb
Total weight on rail		251,000 lb

*To reduce nosing, length of cars between truck centers has been made the maximum feasible within limits of economical body design.

**Based on average ore density of 130 lb per cu ft.

Special Report: The QNS&L



INTERIORS of the all-welded ore cars are smooth, and sloped, to permit rapid clearing of the cars in the tandem rotary dumper at Seven Islands.

and owned by the railroad itself for supply and work purposes, include 175 70-ton hopper ballast cars; 95 box cars; 280 flat cars; 58 air-dump cars; 15 steel cabooses; a number of tank cars; five spreaders, and two snow plows. The hopper cars and cabooses were built by the Canadian Car & Foundry Co.; the cabooses have Hyatt roller bearings. Some of the air-dump cars were built by



LOCOMOTIVE MAINTENANCE, to be concentrated in the slack winter periods, will be handled in this new diesel shop, which is located in the Seven Islands yard.

the Eastern Car Company and some by the National Steel Car Company. Most of the other freight-train cars were purchased secondhand.

The company also has a generous supply of bunk, boarding and kitchen cars for construction and ballast crews; a few passenger cars for transportation of railroad or mine personnel; and two office cars.

What It Will Haul—and How

The Iron Ore

The QNS&L has been designed, built and equipped for the sole purpose of hauling iron ore, produced by the Iron Ore Company of Canada, from the new mines surrounding Schefferville to docks at Seven Islands. Although the railroad will shortly assume common carrier status, its traffic, at least for the foreseeable future, will consist entirely of such ore—plus, of course, supplies and personnel for operation of mines or the railroad.

The ore itself is of three kinds—"blue," or hematite, ore, containing little or no chemically combined water; "brown" ore, and "yellow" ore. Its average iron content runs from 50% to something in excess of 60%.

The 44 ore bodies so far "proved" lie in an area about 80 miles long by six miles wide; and, within that area, in pockets averaging over 300 ft in depth. The "overburden"—rock, earth and other material covering the ore itself—averages not over 12 ft in thickness, and in some places is only two or three feet deep. Hence, the actual mining is relatively simple and economical.

The ore is loosened, where necessary by blasting; and is then scooped out by 6-yd Marion or 2½-yd Bucyrus-Erie shovels. In present preliminary operations, depending on the location of the ore body being worked, and its relation to spur track, the ore may be loaded by shovel directly into railroad cars or into 15-yd, 33-ton Euclid trucks. These trucks, in turn, may dump directly into cars from built-up ramps or into a crusher, from which the ore is carried by belt conveyor to a loading pocket under which empty cars are spotted in much the same way that hopper cars are spotted for loading at coal mine tipples. In the permanent operation, all ore will go by truck to crusher and loading pocket. An automatic tripper on the loading mechanism in this pocket prevents

overloading of cars. Average truck haul to cars or crusher is short—considerably less than a mile at present.

Production plans call for shipment of 10 million tons of ore during an average annual mining season of 150 to 180 days; but this production could probably be doubled (to 20 million tons) if necessary. The 10-million ton goal, however, is not likely to be reached until 1956 or 1957. Movement during this 1954 year of "test, tryout and break-in" is expected to total only about 1.5 million tons; in 1955, around 6 million tons.

Train Operation

Annual ore production of 10 million tons during a 150-180 day mining season would call for six or more loaded 100-car ore trains, and an equal number of empty trains, every 24 hours. At present, average daily movement is only three ore trains and three empty trains.

As ballasting is completed and track, particularly in muskeg country, becomes stabilized, speed limits will probably be increased from the present 30-mph maximum (20 mph on descending grades) to the calculated optimum of 40 mph for loaded trains and 50 mph for empty trains, with some reductions below those limits on curves of six degrees or more. This speed increase will, in turn, substantially reduce overall running time, which currently averages 16 hours. The fastest overall time recorded up to early September was 11 hr, 22 min—by an inspection train.

Except in number and speed of trains, increased ore production is not likely to require any basic change in the railroad's present operating practices. There may, however, be some changes in train loadings, because the diesel locomotives are giving a better performance than was anticipated. Originally, it was planned to use four

diesel units for 115 loaded ore cars—an average, excluding caboose, of 28.75 cars per power unit. Actual experience to date has proved, however, that three diesel units can satisfactorily handle as many as 100 loaded ore cars—an average, again excluding caboose, of 33.33 cars per unit. Hence, operation may eventually be standardized on a basis of loaded trains of 105 cars plus caboose, and three diesel units, or longer trains with four units.

Ore trains are assembled for southward movement at Silver Lake yard, which is about 1½ miles below the actual northern railhead at Schefferville. Loaded ore cars are brought to Silver Lake over several spurs radiating out from the yard to the various nearby mining operations. New spurs will be built, and present spurs lengthened, moved or abandoned as progress of mining requires. These mine spurs are owned and operated, not by the railroad, but by its parent corporation, the Iron Ore Company of Canada. Loaded cars inbound to Silver Lake, and empty cars outbound from Silver Lake for distribution to mines, are handled on the spurs by IOCC train crews. About seven miles of spur track are now in operation in the area.

From Silver Lake, loaded ore trains normally run non-stop to Oreway, where crews are changed and equipment inspected in preparation for another non-stop run to Seven Islands. Under the railroad's operating plan, these loaded trains have right-of-way over empties, and will normally hold main track when meeting northbound empties.

Empty trains are assembled in the "empty" yard at Seven Islands for the northward run to Silver Lake yard. These trains, however, will ordinarily be required to stop on sidings for meets with southbound trains.

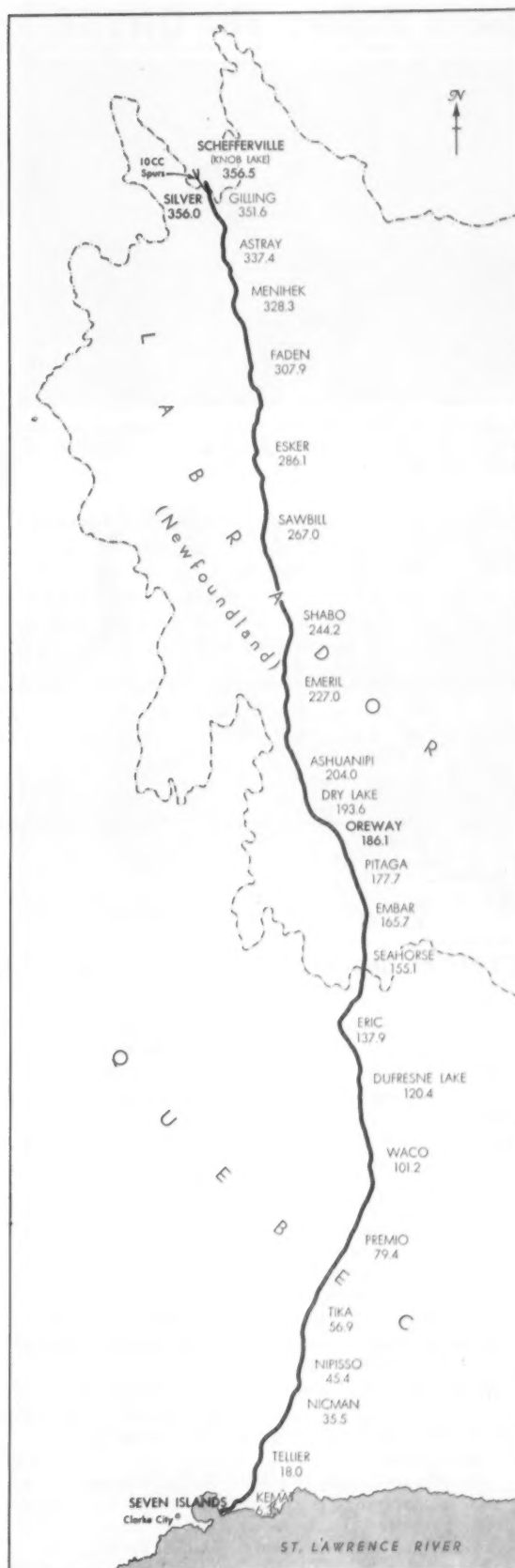
In addition to ore trains, the railroad contemplates operation of one supply train and two "express supply" trains each week. The supply train will carry heavy supplies to mining and railroad camps, and do whatever local switching is necessary. "Express supply" trains will distribute food and other lighter supplies of the kind that, in the United States or elsewhere in Canada, would probably be designated as "express."

All trains are classified as "extras." For record-keeping purposes ore-car trains are identified consecutively by number, the numbers being preceded by "L" for a loaded train and "E" for an empty train. "L105," for example, indicates the 105th loaded ore train operated southbound this year.

Train Crews—Train crews will normally work in what is described as a "continuous relay chain-gang pool" out of Seven Islands. They will take an empty train to Oreway, 186 miles and from six to eight hours (under anticipated normal operation), north; will lay over there for an eight-hour rest period; complete the run to Silver Lake; take another rest period there; and repeat the same schedule, in reverse, in returning to Seven Islands. Normal layover at Seven Islands is expected to be from 24 to 36 hr, which will make it possible for men to establish a permanent home if they wish to do so. Necessary housing for layover crews is being provided at Oreway, Silver Lake and several other points.

Centralized Traffic Control—All road trains will

THE QNS&L has two subdivisions—Wacouana, from Seven Islands to Oreway, and Menihek, from Oreway to Schefferville—and 23 passing sidings.



Special Report: The QNS&L



SOUTHBOUND ORE TRAINS hold main track in meets; power switches at south ends of sidings divert northbound empties into sidings.



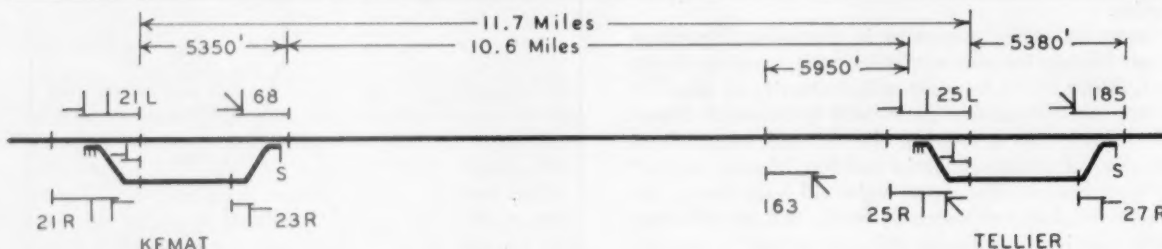
SPRING SWITCHES at north ends of sidings permit northbound trains to pull out without stopping after meeting a southbound train.

be operated under a system of centralized traffic control, especially designed to meet the railroad's particular operating problems. At present, the CTC system extends only to MP 166, with operation north of that point by train order, but by the beginning of the 1955 mining season CTC will be in operation over the full 356 miles

from Seven Islands to Schefferville. The CTC system is controlled, and all dispatching is done, from Seven Islands.

How CTC governs actual train movements, and details of the system itself, are outlined below and on page 58.

Other Train Communications—Beside the CTC,



TYPICAL SIDING-TO-SIDING SIGNAL LAYOUT

Centralized traffic control signal and siding layouts on the QNS&L have been specially designed to fulfill its operating requirements, by permitting loaded southbound ore trains to hold main track when meeting northbound empties, and requiring the latter to take sidings.

Consequently, 22 of the railroad's 23 passing sidings have power switches at south ends, to route northbound trains into sidings, and spring switches at north ends to permit northbound trains to pull out without stopping. The sole exception is the siding at Oreway, where crews change, which has power switches at both ends.

In a typical siding-to-siding layout, such as is shown in the diagram, there is at each power switch a standard arrangement of three dispatcher-controlled signals (e.g., 163, 25L and 25R) to authorize trains to proceed either north or south on main track, or to enter siding. The leave-siding signal (27R) is the only dispatcher-controlled signal at the spring switch (north) end.

Southward signal 185, immediately in approach to the spring switch, is an automatic signal that serves two purposes: (1) As facing-point protection for the switch; and (2) as an approach signal for dispatcher-

controlled signal 25L at the south end of the siding. Northward signal 163 is the approach signal for northward dispatcher-controlled signal 25R at the power switch.

Train movements are authorized by aspects displayed by signals at sidings, such as signals 21L, 21R and 23R at Kemat. These signals, as well as comparable signals at other sidings, and power switches, are controlled by levers in the dispatcher's office at Seven Islands.

Normally, trains moving in the same direction are spaced uniformly throughout a 24-hr period, i.e., if four loaded trains are dispatched southward in a day, they are about six hours, and from 80 to 100 miles apart. Therefore, there was no reason for installing intermediate automatic block signals to permit following trains to occupy the same siding-to-siding block.

A typical block, for use by one train at a time, extends from one power switch to the next power switch; for example, from northward signal 21R at Kemat to northward signal 25R at Teller. Because of the rough terrain, sidings could not be constructed equal distances apart; the interval between them ranges from 4.4 to 23 miles. Their locations are indicated in the sketch map on page 53.

all road locomotives and cabooses are, or soon will be, equipped with Motorola two-channel radio. One channel is for communication between head and rear ends of the same train; between trains, or between trains and wayside radio stations at Seven Islands, Oreway and Schefferville. The second channel is for communication with the yardmaster when a locomotive is in the yard.

In addition to the conventional radio on each caboose, a walkie-talkie set is provided for trainmen inspecting trains.

There are also three railroad-owned automatic telephone exchanges, at Seven Islands, Oreway and Schefferville. Those at the two latter points were manufactured by the Automatic Electric Company. The three are interconnected by trunk lines, so a man in any office can dial through to any phone in any of the three exchanges, or trainmen can call in from sidings. A manual switchboard at Seven Islands is used to connect through to the commercial telephone system.

IOCC Terminal at Seven Islands

As previously stated, and as shown in the diagram on page 56, the tidewater terminal yard at Seven Islands is a hump-retarder facility, incorporating a 500-car receiving yard, a 760-car classification yard, and a 500-car "empty" yard, all of which can, and probably will, be enlarged at some future date. There is also a car dumper; a system of belt conveyors leading from dumper to ship loading docks, or, alternately, to ore storage piles; tracks serving those piles; and a combination yard office and scale-house, with a second-story yardmaster's office, at the crest of the hump.

Like the mine spurs near Schefferville, all yard facilities at Seven Islands are owned and operated by the Iron Ore Company of Canada; the only QNS&L properties in the yard area are locomotive repair shops and locomotive storage sheds.

On arrival at Seven Islands, a loaded ore train goes directly to the receiving yard and then is pushed up to the hump leading to the classification yard, which is beyond, and in a straight line with, the receiving yard. Just below the crest of the hump is an electronic track scale, manufactured by Cox & Stevens Aircraft division, Revere Corporation of America, which automatically records the weight of each car on the car's master IBM record card (described below). This weighing is accomplished in three seconds, during which the car must be on the scale by itself.

Except that each car is humped singly—there are no two- or three-car cuts—the humping operation is conventional, at an average speed of four cars per minute, with a possible maximum of 7.5 cars. Power switches and retarders are in service, using automatic switching controls for switches and conventional controls for retarders. Automatic retarder controls could be added later when the yard is enlarged.

All switch and retarder equipment was furnished by the General Railway Signal Company.

Cars are classified according to the analysis of the ore they carry, so they may be dumped in such order that the mixture of ore delivered into the hold of a ship will meet selling specifications.

At the lower end of the classification tracks, sidarm



THIS MACHINE controls power switches and retarders in the "empty" yard at Seven Islands. Radio controls are located at each side of the panel.

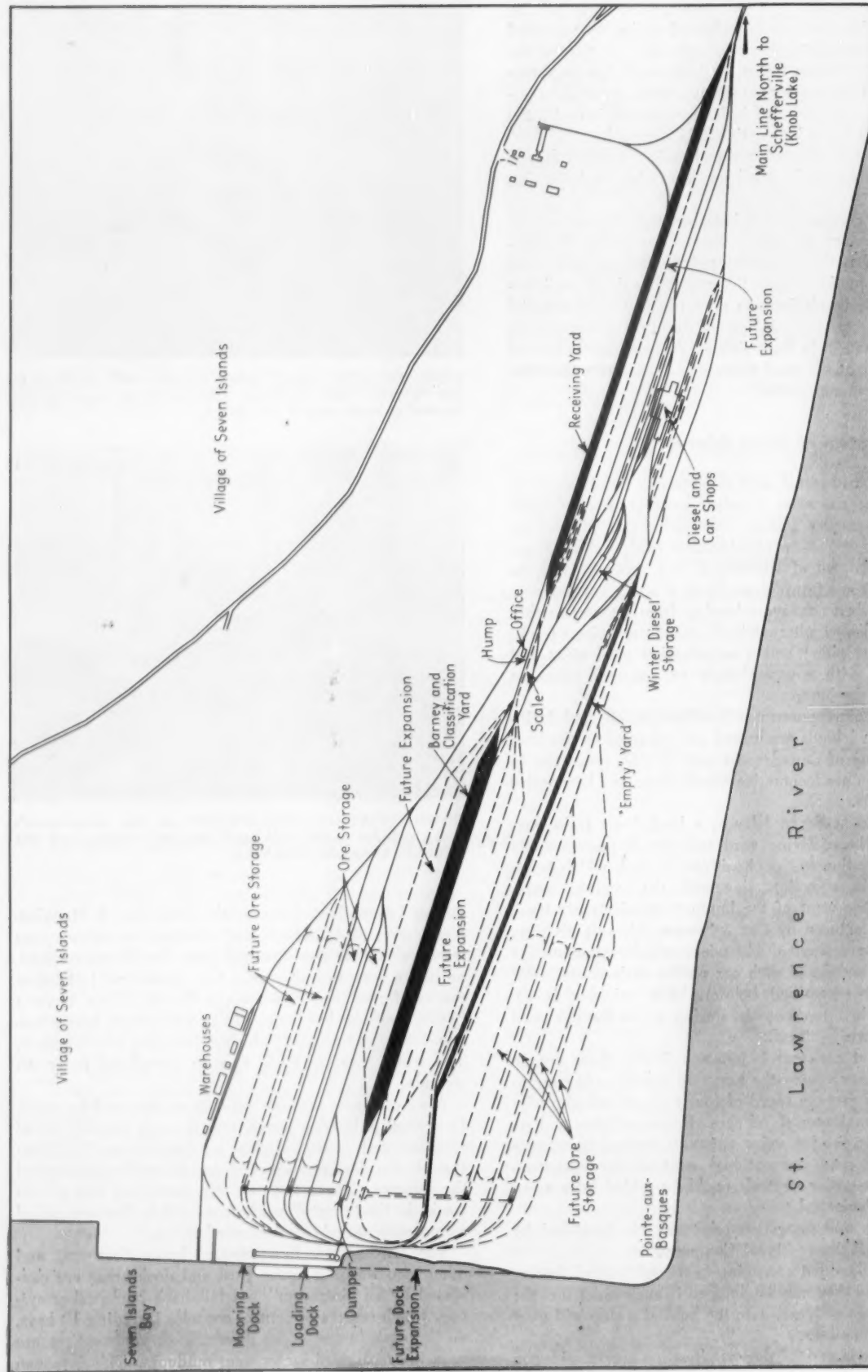


COMMUNICATIONS EQUIPMENT on the yardmaster's desk includes radio, talk-back speaker system, and the railroad's automatic telephone.

pusher locomotives, built by the Atlas Car & Manufacturing Co., of Cleveland, and running on narrow-gage tracks alongside the standard-gage classification tracks, move the cars, two at a time, to a barney pit just below the reinforced concrete dumper house. From there a barney hoist pushes them, still two at a time, into a tandem rotary car dumper, which rotates and empties them. The whole two-car cycle can be completed every 65 seconds.

After cars pass through the dumper they roll by gravity around a 180-deg curve, and through another set of retarders and power switches, separately controlled from those in the classification yard, and 80 car-lengths beyond the dumper. There the cars are routed to one of the tracks in the "empty" yard, from which they are pulled to make up outgoing northbound trains.

The yardmaster, humpmaster, hump foreman, and other men working in the yard and dock areas are connected by an "intercom" and talk-back loudspeaker system, which centers in control consoles including 10 keys, on the desk in the hump office. Small loudspeakers are used in offices, and larger ones outdoors. This intercom



SEVEN ISLANDS TERMINAL

Loaded ore trains, inbound from the main line, go directly to the receiving yard (lower right). Cars are then humped one at a time, weighed, and classified according to type of ore they carry. From the classification yard they are moved two at a

time, by sidearm pusher locomotives and barney, to a car dumper (left center), and then allowed to roll by gravity around a 180-deg curve into a retarder-controlled "empty" yard, where they are made up into trains for return to the mines around Schefferville. Conveyor belts move ore from the dumper to vessels or to stockpiles. Ample room has been allowed for future expansion of all facilities.

Special Report: The QNS&L



1 AN ELECTRONIC SCALE weighs each car humped. Note fog lights over far left corner of scale.



2 RETARDERS and power switches control cars moving down the hump onto classification tracks.

and talk-back system was made by the Electronic Communications Equipment Company.

Roller Bearings, Fog—and TV—Although the yard is basically conventional, both in design and operation, it presented several interesting problems which merit special mention.

For one thing, it is the first yard ever planned or built for exclusive use by roller-bearing cars. IOCC design engineers drew heavily on all experience available on U.S. and Canadian railroads, but still had to make many modifications in their early plans. Eventually, the problem was worked out by installing a test track in both loaded and empty yards, and then revising the other tracks on the basis of experience gained from those test tracks. "The only real problem now remaining," a terminal officer told a *Railway Age* reporter, is that of occasional wind resistance to empty cars rolling around the 180-deg curve between car dumper and empty yard. As can be seen from the diagram (facing page), a strong easterly wind, blowing in from the Gulf of St. Lawrence, would hit these cars head-on about halfway around this curve.

Another problem, of special concern to retarder operators, is the heavy fog which frequently shrouds the yard because of its proximity to the water, concealing cars from the operator's view. This difficulty was solved by installing, just below the hump crest, and across the track from the yard office and retarder tower, a battery of six sodium-vapor lights which, even in a heavy fog, cast enough of a shadow from passing cars to guide retarder operators.

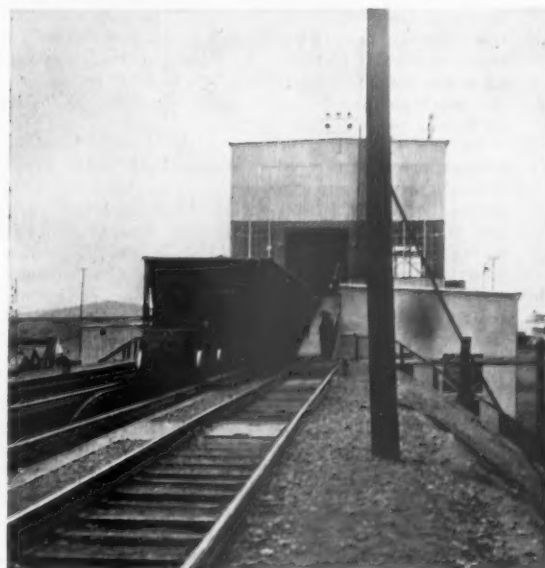
Experiments have also been conducted successfully with a television camera set up at the entrance to the receiving yard to show car numbers in inbound trains on a receiving set in the hump office.

Locomotives used in the yard are equipped with two-frequency radio, also furnished by Motorola. One frequency is used for communication with the trainmaster and yardmaster; the other, when in the dock area, for communication with the man in charge of operation of the car dumper and of movement of ore to the docks. Walkie-talkie radio sets are used by foremen on the docks.

Because the QNS&L is essentially a one-commodity railroad, with all cars running through from terminal to



3 CARS ARE SHOVED in pairs from classification yard to barney pit by narrow-gage sidearm pusher.



4 STILL TWO AT A TIME, cars are moved by barney into a tandem rotary car dumper.



OVERALL OBJECTIVE of the QNS&L is fast, economical delivery of iron ore to Seven Islands.

terminal, record-keeping can be, and is, a relatively simple—and highly mechanized—operation.

As each car is loaded at the mines, 21 or 22 small samples of ore are removed from it. These are analyzed at Schefferville, and the analysis is Teletyped to the hump office at Seven Islands in advance of the train's arrival to serve as a basis for its classification. The receiving Teletype machine in the Seven Islands hump office both page prints, for the information of yard forces, and cuts a tape. This tape, in turn, when fed into an IBM machine, cuts an IBM card for each car, showing car number, whether loaded or empty, kind of ore, mine number, and date. These cards, kept in car order for each train, are stored until the train is classified. They are then fed into the scale recording mechanism, which automatically

punches into them the electronically determined gross weight of each car as it goes over the hump. The cards then go to the ore company's IBM offices for calculation of net weights and for record and billing purposes.

There are no other waybills, and the only record a train conductor has to keep is a list, in order, of his car numbers, corrected, if necessary, to show set-outs or pick-ups. Television "grabbing" of car numbers at the entrance to the receiving yard would, of course, serve as a check on the conductor's records, and would eliminate errors which might result from a change in a train's consist, or from the unlikely event of the IBM cards getting out of order in the hump office.

Where the Ore Goes

As the ore is unloaded from cars in the rotary dumper, it falls onto a grizzly, and from there, depending on its size, into a hopper or a crusher. From either, it falls again onto a short 72-in. reversible belt conveyor in the basement of the reinforced concrete dumper house; this, in turn, can be regulated to feed the ore onto either a 48-in. belt conveyor leading directly to an outdoor stockpile, or onto two 60-in. belt conveyors leading to two concrete mixing bins, and thence to dockside for direct loading into steamships.

There are at present about 2½ miles of belting, which will be increased as new stockpiles are established or more ship loading space created. The longest single belt is 4,300 ft. Speed of the belts is 529 ft per minute; they travel on steel bearings except beneath the bins, where rubber and fiber impact rollers are used because of weight and pressure of falling ore. Each belt is estimated to be (Continued on page 60)

SIGNALS AND POWER SUPPLY

Centralized traffic control on the QNS&L is operated from Seven Islands. The track diagram on the control machine has lamps which are lighted to show locations of trains on corresponding sections of main track or on sidings. The desk section of the machine includes an automatic graphic recorder to record movement of trains.

In the signaling system, track circuits between sidings are the normally de-energized coded type. When a lever-controlled signal is to be cleared, a preliminary part of the control is to feed the track circuits, cascade, from the leaving end to the entering end of the siding-to-siding block. Thus, the signals are controlled by track circuits without wayside line-wire circuits. The CTC line code controls and return indications are carried on two wires on the pole line. CTC equipment was furnished by the General Railway Signal Company, and installed by railroad forces.

The pole line is unusual in that it has only four wires—one pair for 23,000-volt a-c power for signaling, and the other pair for the CTC line code, as well as for all telephone and Teletype communications. Each "wire" consists of strands of aluminum, spiral wound on a steel core, overall conductivity being equal to that of No. 4 copper. Where terrain permits, poles are spaced 20 to the mile, but, where necessary, spans range up to 1,500 ft.

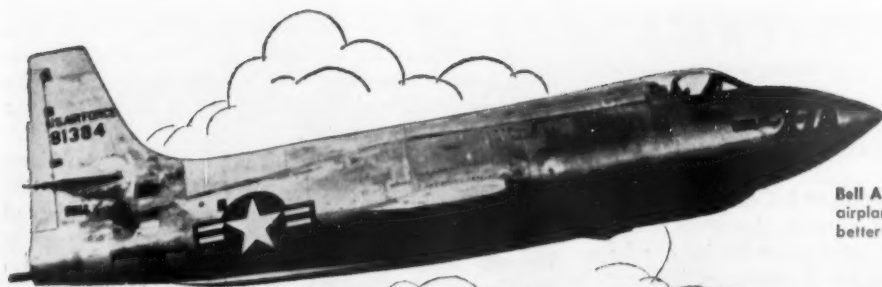
Large, high-voltage insulators are used not only

on the 23,000-volt circuit, but also on the second circuit as a means of minimizing noise on the communications. They are on side brackets, the 23,000-volt pair at the top of each pole being spaced 36 in. apart, and the second pair, 13½ ft lower, 24 in. apart. Power wires are not transposed, but the bottom pair are in a continuous roll that is completed every fifth pole, thus minimizing interference.

Communications circuits, on the lower pair of pole-line wires, include the dispatcher's telephone on the physical pair, and 11 single channels of carrier. The dispatcher's circuit is connected to phones in numerous offices, in boxes at ends of sidings, and at other locations along the railroad. Ten voice circuits, and six Teletype circuits are derived from the carrier. If either of the two lower wires on the pole line is broken, the communications carrier can be switched over to operate on the two top wires which transmit the 23,000-volt a-c power.

Carrier apparatus was furnished by the Westinghouse Electric Corporation.

Power for signaling, communications and other purposes—including belt conveyors at Seven Islands—is 23,000-volt a-c, single phase, and is obtained from two new hydroelectric projects, Marguerite Dam at Clarke City, just a few miles west of Seven Islands, and Menihék Dam, at MP 330. The Clarke City project develops 25,000 hp; power from it is fed north as far as Oreway. Menihék dam develops 12,000 hp, which is fed south to Oreway and north to Schefferville, and can be quadrupled if necessary.

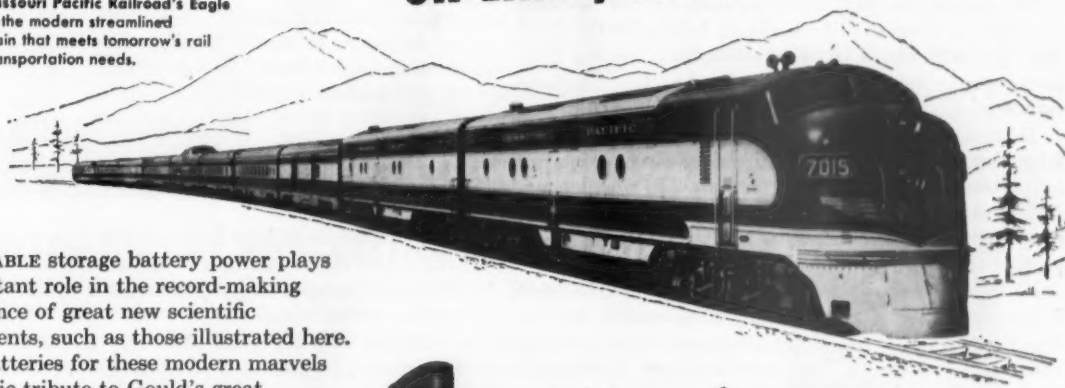


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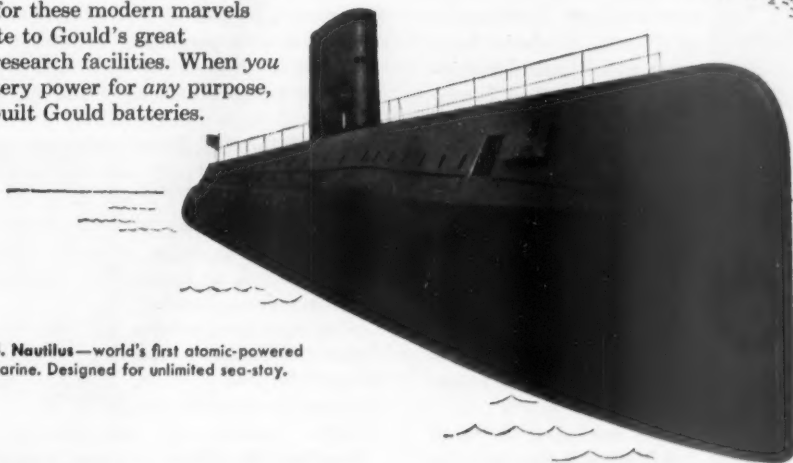
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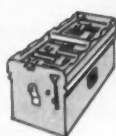
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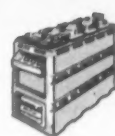
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For Diesel Locomotive Starting



For Standby and Emergency Power

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Special Report: The QNS&L

(Continued from page 58)

capable of handling up to 30 million tons of ore before requiring renewal.

Capacity of the belts, operating at full speed, is about 8,000 tons an hour, with an average of around 6,500 tons, which means that a 25,000-ton ore carrier can be loaded in about four hours, or less if necessary. The car dumper is capable of handling about 9,000 tons per hour, but its operation will be regulated to the speed of the belts. Conveyors and loading docks are floodlighted for round-the-clock operation.

The docks have a loading frontage of 800 ft, which can be extended later if necessary; a mooring frontage of 300 ft for ships waiting for loads; and water depth at low tide of 37 ft—more than enough to accommodate the largest ore vessels. In addition to the ore-conveying machinery, they have a 150-ton stiff-leg crane, which was used to unload railroad cars and locomotives shipped into Seven Islands by water.

The rotary dumper was furnished by the Wellman Engineering Company of Cleveland; belting by the Good-year Tire & Rubber Co. and the Dominion Rubber Company; and conveying machinery by the Stephens-Adamson Manufacturing Company, Belleville, Ont.

Beyond Seven Islands—This year's ore is moving from Seven Islands almost entirely by ocean-going vessel, principally to such U.S. ports as Philadelphia and Baltimore (1,550 water-miles); and this type of movement will probably continue to account for a large proportion of all ore handled.

By the opening of the 1955 shipping season, however, it is expected that a transshipping dock, now under construction, will be available at Contrecoeur, Que., on the south bank of the St. Lawrence just east of Montreal. Ore moved to that point from Seven Islands in large vessels will be transferred there to canal boats for shipment to Great Lakes ports. This Contrecoeur dock is considered as a temporary facility, to be used until completion of the St. Lawrence Seaway permits ore shipments from Seven Islands direct to Lake ports in the same vessel.

Ultimate destinations to which shipment is now contemplated include: In Pennsylvania—Aliquippa, Butler, Midland, Monessen, Neville Island, Pittsburgh and Sharon; in Ohio—Cleveland, Hamilton, Middletown, Steubenville, Struthers, Warren and Youngstown; in West Virginia—Weirton and Wheeling; in New York—Buffalo; and in Kentucky—Ashland. Additional points may, of course, be added later.

Why Stockpile?—Ore will be stockpiled at Seven Islands for two reasons. The first is because the ore shipping season is expected to run from 200 to 240 days a year, or just about 33 1/3% longer than the anticipated 150-180-day mining season. Hence, the stockpiles will provide a reserve from which ore can be shipped after the mines close down each fall, and before they open up each spring.

The second reason is to avoid holding ore cars under load; that, IOCC and QNS&L officers say, is something that just won't be done.

Stockpiles are expected to total, at maximum, about

two million tons of ore, although perhaps double that quantity will pass through them in the course of an operating year. On the other hand, a lower stockpile capacity would be possible if the mining season should turn out to be longer than expected.

Removal of ore from stockpiles for shipment will require reloading it into railroad cars, and then sending those cars through receiving and classification yards and car dumper, just as described above. Thus, ore going through the stockpile would be humped twice—once into the pile and once out of it.

Winter Operation?—While winter operation of the railroad, on a substantial scale, is not presently contemplated—since there would be little for it to haul when mines are not running—the possibility of such winter operation apparently holds no special terrors for the men on the ground. Schefferville, they point out, is only a little farther north than Edmonton, Alta., and on almost exactly the same latitude as the extreme southern tip of Alaska.

Snow conditions—which, strangely enough, are worse around the QNS&L's southern end than its northern—would be no more severe, they think, than those encountered by Canadian lines north of the Great Lakes, or by many railroads in different parts of the United States. "The winter," as one of them put it, "would be longer, but no worse."

Maintenance Policies

Maintenance policies have not yet been worked out in full detail, either for track or equipment, and are subject to change as operating experience and operating requirements dictate.

Track—Section gangs now vary in size according to the work to be done in a given territory. Present thinking leans toward a permanent maintenance organization of 30 gangs, each handling approximately 12 miles of line. Existing gangs are using a full complement of power tools, and such mechanization will undoubtedly be a regular feature of future maintenance work.

Equipment—Plans for maintenance of equipment are a little more fully matured. A diesel shop—Transite siding on concrete foundations—has been built in Seven Islands yard, to serve, when necessary machinery has been installed, as locomotive maintenance headquarters for the entire railroad.

Car maintenance also will be centralized at Seven Islands, although no permanent building has yet been erected for that purpose. Meantime, necessary car work is being handled on outside rip tracks, or in one of two outsize "Quonset huts," with three interior tracks apiece. These huts also serve as winter storage sheds for diesel locomotives.

Generally, it is contemplated that all heavy equipment maintenance will be concentrated during winter months, when mines are not operating, and when the railroad is either shut down or running at a small percentage of its capacity.

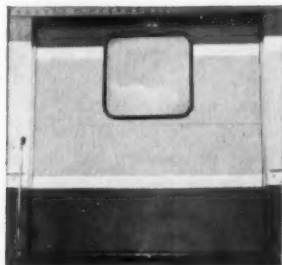
Such a program will insure maximum availability of all equipment during the summer operating peak, when maintenance can be limited to inspection and

(Continued on page 62)

MET-L-WOOD METAL BONDED TO PLYWOOD DOORS

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Completely weatherproof Met-L-Wood doors effectively prevent internal rust and rot...and their tough, smooth surfaces stay new-looking for years. Stainless steel channels along bottom edges of sliding doors are rustproof...virtually wearproof. All-rubber window sash installed or removed in minutes...rattleproof...water- and weatherproof. Available in full width and split types... sizes to meet all needs.

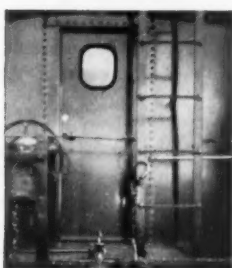


Exclusive Split Door Seal

Drawing above shows simple Met-L-Wood Split Door Seal which assures weather- and watertightness for years of continual use. Seal also provides effective cushion when closing split doors.

PASSENGER CAR END, VESTIBULE, INTERIOR DOORS

Sound-deadening, insulating, vibration-damping Met-L-Wood doors for passenger cars add to service life, cut deadweight... Combine modern, clean-line beauty with great strength and durability. Furnished for manual or automatic operation, with or without hardware assembly. Tapping plates for hardware are built into doors... invisible additions to strength and trouble-free service life. Sizes and types to fit all requirements... exact dimensions insure quick assembly and perfect fit. Door thicknesses from 1/2" up, as required.



CABOOSE DOORS

Met-L-Wood caboose doors are built to last the life of the caboose—and to give trouble-free service the whole time. Weather-proof, warp-proof, rot-proof doors can be provided with or without stationary windows in all-rubber sash or with standard drop sash. Available with or without hardware. In all sizes to exactly meet specifications.

DIESEL LOCOMOTIVE DOORS

Widely used by builders on new locomotives, Met-L-Wood doors guarantee trouble-free operation of end and interior doors on diesel road locomotives and cab doors for diesel switchers. Furnished to exact dimensions, with or without windows; either with hardware installed, or with tapping plates placed for hardware assembly on the job.



Write for this Bulletin

Met-L-Wood Bulletin 520 gives the complete, illustrated story on Met-L-Wood doors for railroad uses... shows construction details, describes standard and special types and sizes. Your copy sent free upon request—write for it today.



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MET-L-WOOD • STRONG... LIGHT... Smooth Finish... Sound Deadening... Fire-Resisting... Insulating

Special Report: The QNS&L

(Continued from page 60)

running repairs. Diesel units, incidentally, are expected to average about 100,000 miles each during a "10-million-ton year," and this will make them just about ready for major overhaul each winter.

Who's Behind It

The Companies

The entire project is under the general direction of Hollinger-Hanna, Ltd., a Canadian company equally owned by the M. A. Hanna Company, of Cleveland, and Hollinger Consolidated Gold Mines.

The Quebec, North Shore & Labrador Railway is, itself, a Canadian company, wholly owned by the Iron Ore Company of Canada. That, despite its name, is incorporated in Delaware; and is jointly owned, in turn, by the Hanna Coal & Ore Corp. (a subsidiary of M. A. Hanna Company); Armco Steel Corporation; National Steel Corporation; Republic Steel Corporation; Youngstown Sheet & Tube Co.; Wheeling Steel Corporation; Hollinger Consolidated Gold Mines, Ltd.; Hollinger North Shore Exploration Company; and Labrador Mining & Exploration Co. The two last-named concerns were the organizations which, in Quebec and Labrador, respectively, explored and proved the ore deposits under concessions granted by the provincial governments of Quebec and Labrador (Newfoundland).

The Personnel

QNS&L employees have come principally from other Canadian railroads; the company frankly states that it "borrowed heavily for both personnel and advice" from those railroads, and some of its men have been sent to them for further training.

Operation of the railroad alone, in a "10-million-ton year," is expected to require from 700 to 800 men. Nearly 7,000 were employed at last year's peak period of construction, and present employment on railroad, mines, power plants, town sites, etc., is about 4,600.

Actual management of the railroad under IOCC Project Manager C. E. McManus, is in charge of J. A. Little. A. Bybee is superintendent; J. H. Miller is chief mechanical officer; R. A. Sharood, chief engineer; B. M. Monaghan, assistant chief engineer; A. K. Hansen, superintendent of communications and signals; and W. E. Switzer, signal engineer. J. W. Buford, vice-president of the Hanna Coal & Ore Corp., is acting as coordinator for the entire integrated project, including mines, railroad and terminals, for Hanna and the IOCC.

What It Cost

Total cost of the whole integrated development is approximately \$250 million, of which the railroad alone accounted for between 60 and 80%—from \$150 million to \$200 million.

More precise figures are not available, partly be-

cause the railroad is still not wholly "finished," and partly because the project necessarily involved many joint costs which have not been broken down.

The owning companies contributed, in varying proportions, out of their own funds, a total of \$100 million; the remaining \$150 million was borrowed—\$100 million at 3¾% and \$50 million at 4¼%—from a group of 19 U.S. and Canadian insurance companies.

What About the Future?

Deposits of high-grade direct shipping iron ore "proved" by 12 years of exploration along the Quebec-Labrador border total 417 million tons. Any other figure, one billion tons or two, is, according to geologists on the job, pure guesswork. The 417 million tons is the only "official" figure.

But that alone, mined at the estimated rate of 10 million tons a year, will keep the QNS&L running for 40 years to come.

Meantime, prospecting and exploration are continuing on an intensive basis, with many small geological parties, supplied by float planes, working north and west of Schefferville every summer. The reason for this activity is that, five years after ore production begins, the major part of the land covered by the original exploration concessions will revert to the provincial governments. The Labrador Mining & Exploration Co., in other words, must give up, by 1959, all but 1,000 sq mi of the 20,000 sq mi of Labrador which it now has the right to explore; one-quarter of that, i.e., 250 sq mi, will go to the IOCC. The Hollinger North Shore Exploration Company, in turn, must give up by 1959 all but 300 sq mi of its original 3,900-sq-mi concession in Quebec; 250 of this will go to IOCC. The 500 sq mi to be held by IOCC after 1959 need not be contiguous, but it is understandable that the company, having explored, financed and built the whole development, wants to retain the best of what has been found, or may be found within the next five years.

Reversion to the "Crown" of the bulk of the original concession areas will, in turn, open them to exploration by other interests—and it is by no means impossible that such other interests may, in time, become important shippers over the QNS&L.

Meantime, the development has given Seven Islands something of the aspect of a "boom town," increasing its population six-fold, to 6,000, with perhaps another 1,000 still to come. It is creating in the remote wilderness, once inhabited only by itinerant trappers, a new town—Schefferville—with a population which it is estimated will reach 2,500. It has led to talk of a tremendous power development to be built someday at the Grand Falls of the eastward-flowing Hamilton river—a development which could be rail-connected to the QNS&L main line somewhere in the neighborhood of MP 224.

Whether or not that development, or others, ever come to fruition, and regardless of the results of continuing exploration, the work already accomplished makes it clear that "New Quebec" and Labrador are going to be important factors in the expanding economy of Canada, and in the industry and defense of the United States. And the key to that importance is the Quebec, North Shore & Labrador Railway!

Benchmarks and Yardsticks

MOST PEOPLE who have grown up into their present jobs are usually inclined, at first, to resent the intrusion of so-called "experts," called in to introduce some new technique into their work. But revolutionary new methods and devices are seldom generated on the job. They usually come from "outside"—and who is there who can introduce such new methods quickly, except the "experts" who have some knowledge of them?

We know something about this problem in our publishing business. From observing some magazines of popular circulation we became aware of the existence of improved methods of presenting information—methods which we could not quickly assimilate from seeing only the end product. So we employed, as a consultant, one of the outstanding experts in this work; and it is our belief that what we have learned from him has brought about a great improvement in the ease of reading this magazine. It would have taken us, maybe, a dozen years to have acquired command of these new methods by self-instruction.

The railroads, of course, faced the same situation on a huge scale when dieselization came along. Nobody, no matter how expert he was with steam power, could have learned quickly how to handle diesels, without the help of experts who had put in a lot of time with diesels.

One place where railroading could probably profit by using more "outside" help than has as yet been called in lies in the area of merchandising and marketing research and pricing. Most businesses which have never been otherwise than highly competitive long ago learned the techniques which tell them quickly and accurately what they must do to maximize their sales—and the prices which will maximize their profits. The answers to such vital questions are not left to hunches, or chance or unplanned experiment. Some railroads have already begun this scientific approach to their sales problem in the passenger department; and the Harvard Business School has undertaken a research project in this area (as announced elsewhere in these pages).

If the soap business and the food business and the automobile business can—and they do—use modern methods for keeping themselves at all times offering the kind of products that will increase their sales volume, and at attractive prices, is there any reason why railroads can't do the same thing, in both passenger and freight service?

Experience, it is correctly asserted, is the best teacher. Not only one's own experience—but the other fellow's experience too, if he has had some that we haven't. All-out competition is a novelty for the railroads and railroad men cannot in the very nature of things be expected to know too much about how to deal with it, yet. But there are other businesses that have never known anything else—and that probably have the answers that it will take the railroads a long time to get, if they limit themselves too narrowly to their own experience.

J.G.L.

Securities

(Continued from page 16)

CAR COMPANY at an estimated unit cost of \$8,487. The certificates, to be dated November 1, would mature in 30 semiannual installments of \$34,000 each. They would be sold by competitive bids, the interest rate to be determined by such bids.

NEW YORK, NEW HAVEN & HARTFORD.—To assume liability for \$2,595,000 of equipment trust certificates to finance in part the following equipment costing an estimated \$3,473,000:

Description	Estimated Unit Cost
85 Covered hoppers (New England Car Company)	\$7,650
11 Sleeping cars (N.E. Car)	187,090
4 Bedroom-buffet-lounge cars (N.E. Car)	191,690

The certificates, to be dated October 1, 1954, would mature in 15 annual installments of \$173,000 each, beginning October 1, 1955. They would be sold by competitive bids with interest to be determined by such bids.

Dividends Declared

AKRON, CANTON & YOUNGSTOWN.—new common (initial), 50¢, payable October 1 to holders of record September 17.

ATLANTIC COAST LINE.—5% non-cumulative preferred, \$2.50, semiannual, payable November 10 to holders of record October 22.

CAROLINA, CLINCHFIELD & OHIO.—\$1.25, quarterly, payable October 20 to holders of record October 8.

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.—5% preferred, \$1.25, quarterly, payable October 30 to holders of record October 6.

LEHIGH VALLEY.—30¢, quarterly, payable October 20 to holders of record October 8.

MINNEAPOLIS, ST. PAUL & SAULTE STE. MARIE.—Common, 25¢, payable October 21 to holders of record October 7.

NORTHERN PACIFIC.—75¢, quarterly, payable October 27 to holders of record October 5.

RICHMOND, FREDERICKSBURG & POTOMAC.—voting common, 75¢, quarterly; dividend obligations, 75¢, quarterly; both payable October 1 to holders of record September 20.

VERMONT & MASSACHUSETTS.—\$3, semiannual, payable October 7 to holders of record September 28.

WHEELING & LAKE ERIE.—common, \$1.4334, quarterly; 4% prior lien, \$1, quarterly; both payable November 1 to holders of record October 15.

Security Price Averages

	Sept. 28	Prev. Week	Last Year
Average price of 20 representative railway stocks	70.49	70.15	58.21
Average price of 20 representative railway bonds	96.41	96.55	89.73

Financial

Missouri-Kansas-Texas.—Re-capitalization.—Donald V. Fraser, Katy president, has notified the road's stock-

holders that the outline of a recapitalization plan, submitted by committees representing preferred and common stockholders, will be presented to the directors at an October 8 meeting. A copy of the outline has been mailed to stockholders.

St. Johnsbury & Lemoille County.—Stock Issue.—This road has applied for ICC authority to issue 390 shares of \$100 par common stock, in addition to 1,000 shares now authorized.

Advisory Board

More Double-Door Cars Wanted by PNW Board

Citing the "stringent double-door box car problem" in its territory, the Pacific Northwest Advisory Board has approved a resolution calling for all roads—especially those in its territory—to acquire enough cars of that type "to protect traffic originating in this territory."

The resolution, passed by the board's (Continued on page 69)

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advertisers A.B.C. audited, paid circulation (indication of *voluntary* reader endorsement and resulting advertising value). Like all A.B.C. publisher members, they are pledged to keep true and correct records of circulation; to open all books and records for scrutiny by one or more of A.B.C.'s 65 trained circulation field auditors.

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For forty years the Audit Bureau of Circulations has been a voluntary, cooperative bureau of circulation standards serving advertisers, advertising agencies and publishers. Before 1914, no independent circulation yardstick existed; in 1954 there is no stricter test of circulation value than A.B.C. membership.

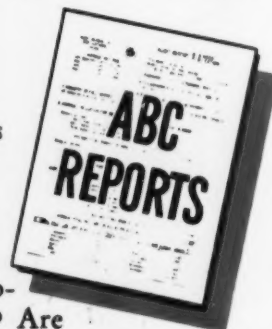
● PROCLAIMS FACTS, NOT OPINIONS!

A.B.C. rules, bylaws and procedures have one purpose . . . the determination of net paid circulation facts for buyers and sellers of advertising. Upon this basis A.B.C. issues standardized statements of the circulation of publisher members,

verifies the figures shown in these statements by auditor's examination, and disseminates circulation data. A.B.C. functions solely where accurate audits are possible; its reports contain no opinions or conclusions.

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Every business publication A.B.C. Audit Report is packed with audited answers to such important questions as: • How much *net paid* circulation? • How much *unpaid* distribution • What are the businesses and occupations of the subscribers? • Where are subscribers located? • What do subscribers pay? • Are premiums used to get subscribers? • Are subscribers in arrears? • What's the renewal percentage?





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to sum up the solid numerical facts about the circulation progress of his publication.

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Advertisers to industry, merchandising firms, institutions and professions seek interested buyers in *specific* markets for their goods and services.

Every paragraph in an A.B.C. business publication report gives such advertisers data valuable for the intelligent application of media to their chosen markets. Paragraph

10, telling them the business or occupation of a publication's subscribers, exemplifies the revealing A.B.C.-audited facts they need to build sound marketing plans, or create productive copy appeals. Because A.B.C. exists, specialized advertising appeals can go to clearly identified markets, through audited, paid circulation.

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A.B.C. membership brings to business publishers a solid source of exact circulation counts that meet impartial, generally accepted standards. A.B.C. business publications thus win the *attention* and *confidence* of advertisers and agencies.

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ways from known A.B.C.-audited circulation. They can set equitable rates. They can identify the circulation characteristics that make their publication distinctive; build the type of audited, paid circulation their advertisers want.

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to read, together with business men who invest in advertising help to bring to American and Canadian publications the income that keeps them free;—self-reliant contributors to our industrial growth and high living standards.



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SIMMONS-BOARDMAN PUBLICATIONS

Advisory Board

(Continued from page 63)

executive committee and later by the board in general session, said lack of such equipment was "(1) creating a hardship on shippers and receivers of packaged and palletized freight because of their inability to mechanically load or unload, in most instances, single-door box cars and (2) diverting traffic to other means of transportation." The board will refer the resolution to the National Association of Shippers Advisory Boards meeting at Louisville, Ky., October 12.

Abandonments

Authorizations

ARKANSAS WESTERN.—To abandon a 20.8-mile segment of its line from a point two miles east of Waldron, Ark., to Forester.

ATLANTIC COAST LINE.—To abandon a half-mile segment of its main line at Pinner's Point (Portsmouth) Va., formerly used to connect with boats operating to and from Norfolk.

BOSTON & MAINE.—To abandon a 37-mile line between Blackmount, N.H., and the Pemigewasset Valley-main line junction near Plymouth.

ERIE.—To abandon a 4.3-mile portion of its Toby branch from Hydes, Pa., to Kyler's Corners, and its entire 1.4-mile Kyler Run branch at Kyler's Corners.

PORTLAND TERMINAL.—To abandon 405 ft of its main line at Portland, Maine, a portion of which is to be taken by the Maine Turnpike Authority. The authority has agreed to pay the company \$292,000 for the easement.

WHEELING & LAKE ERIE.—To abandon a 5.7-mile portion of its Massillon line running through Burton City, Ohio, to Dalton Station.

Traffic Research

RR Passenger-Traffic Study Begins at Harvard

The Harvard School of Business Administration has inaugurated a research project into some aspects of the railroads' situation with regard to passenger traffic. The program is under direct supervision of Dr. George P. Baker, Professor of Transportation, and Arthur H. Tully, assistant director of research. Staff members who will devote full time to the program are Assistant Professors James Parks and Dwight Ladd—who will be doing this work in partial fulfillment of requirements for their doctorates. An advisory committee on the project has been named, as follows:

J. J. Alms, general passenger traffic manager, Burlington; C. E. Bell, vice-president, public relations, Seaboard Air Line; R. M. Edgar, vice-president, Boston & Maine; K. H. Lyrla, assistant comptroller, Illinois Central; J. E. Monroe, vice-president and director, Bureau of Railway Economics, AAR; E. C. Nickerson, vice-

DOMESTIC EQUIPMENT ORDERS REPORTED BY RAILWAY AGE IN THIRD QUARTER 1954*

LOCOMOTIVES			Issue Reported	Builder
Purchaser	No.	Type		
Central Vermont	4	1,600-hp. Rd.-Sw.	Sept. 13	American
GTW	17	1,750-hp. Rd.-Sw.	Sept. 13	Electro-Motive
UP	50	1,750-hp. Freight	Aug. 16	Electro-Motive
FREIGHT CARS				
Bangor & Aroostook	350	50-ton Refrigerator	Aug. 30	Pacific Car & Fdy.
C&M	150	50-ton Box	Aug. 2	ACF
Columbia Geneva Steel Co.	9	90-ton Gondola	Aug. 30	Thrall
Cotton Belt	275	50-ton Box	Sept. 27	Pullman-Standard
DL&W	500	50-ton Box	Aug. 9	ACF
	500	50-ton Box	Aug. 9	Magor
D&TSL	100	Box	Sept. 13	Greenville
FGE	300	50-ton Refrigerator	Sept. 6	Co. Shops
GN	25	70-ton Gondola	July 26	W.R. Shops
GM&O	100	50-ton Pulpwood	Aug. 23	R.R. Shops
NC&StL	12	50-ton Pulpwood	July 5	R.R. Shops
Nevada Northern	4	Caboose	Aug. 2	Rail & Ind. Equip. Co.
New Haven	85	Covered Hopper	Aug. 30	Pullman-Standard
Nickel Plate	150	Box	Sept. 13	Greenville
North American Car Corp.	10	70-ton Phosphate	Aug. 23	Thrall
Reserve Mining Co.	350	50-ton Ore	July 5	Undisclosed
Rock Island	100	Box	Sept. 20	Pullman-Standard
SP	1,500	Box	Aug. 30	R.R. Shops
Texas Natural Transport.	150	Tank	Aug. 23	General American
TP&W	4	Caboose	Aug. 9	R.R. Shops
Transportation Materiel Command	40	50-ton Box	July 19	Pullman-Standard
	50**	50-ton Hopper	July 19	Thrall
UP	200	70-ton Tank	Aug. 30	ACF
	300	Auto. Box	Aug. 30	Pullman-Standard
	200	50-ton Box	Aug. 30	Pullman-Standard
WFE	50	70-ton Mech. Refrigerator	Sept. 6	Co. Shops
WM	50	70-ton Cov. Hopper	July 19	Pullman-Standard
WP	40	Box	Sept. 13	Pullman-Standard
	100	Box	Sept. 20	Pullman-Standard
PASSENGER CARS				
B&M	42	RDC-1	July 5	Budd
	13	RDC-2	July 5	Budd
LI	2	RDC	Aug. 23	Budd
	125	Coach	Sept. 13	Pullman-Standard
L&N	13	Coach	Sept. 6	ACF
New York Transit Authority	400	Subway	Sept. 13	St. Louis Car
Rock Island	35	Sleeping	Sept. 20	Pullman-Standard
UP	25	Baggage	Sept. 27	ACF

*Supplementing lists of equipment orders reported during first and second quarters of 1954 (Railway Age, April 5, page 78, and July 5, page 10).

**For service in Korea.

president, passenger service, New York Central; W. W. Patchell, vice-president, Pennsylvania; L. K. Silcox, honorary vice-chairman of the board New York Air Brake Co. Members of the committee from the faculty of the School include: William J. Cunningham, James J. Hill professor of transportation (emeritus); Neil H. Borden, professor of advertising; president (1954) American Marketing association; Harry L. Hansen, professor of business administration (marketing); Russell H. Hassler, professor of accounting, president (1953) American Accounting Association; Ross C. Walker, professor of business administration (accounting).

This committee had an all-day meeting at the School on September 8, at which objectives were discussed and a general plan of inquiry was outlined by the research men. One aspect of the investigation will have to do with cost data required to determine whether a given train, or passenger service on a particular segment of railroad or on a railroad as a whole, is "paying its way." The other objective of the inquiry is to ascertain methods used, or usable, by railroads to survey the passenger market and to adapt their service to it, for optimum results. Mr. Ladd is conducting the cost studies, and Mr. Parks those in marketing and merchandising.

In accordance with standard practice at the School, the advisory committee will be counted on heavily for

advice and counsel—but findings of the researchers will be entirely their own.

Equipment & Supplies

FREIGHT CARS

Freight Fleet's 2-Month Loss Was 10,437 Cars

Fleets of the Class I railroads and their car-line affiliates lost 10,437 freight cars during the two-month period from July 1 through August 31, according to figures presented by Chairman A. H. Gass of the AAR Car Service Division, in his latest review of "The National Transportation Situation."

The figures showed that 13,893 cars were retired during the two-month period, when only 3,456 new cars were placed in service. The September 1 fleet totaled 1,835,310 cars, down 17,287 cars from the September 1, 1953, total of 1,852,597 cars.

Serviceable ownership was down 45,949 cars—from 1,755,584 on September 1, 1953, to 1,709,635 cars as of the first of this month. In that connection, however, Mr. Gass noted that the

railroads "continue to report about 75,000 surplus serviceable cars daily as compared with only minor shortages which are confined principally to high-grade and wide-door box."

Reporting on the refrigerator car situation, the CSD chairman said there are now about 640 mechanical refrigerator cars in service, as compared with 319 a year ago. He noted that these cars handle a "large part" of the frozen food movement, which is about the only "reefer" traffic that is holding up.

The **Canadian National** has ordered 110 70-ton flat cars from the Canadian Car & Foundry Co. at an approximate cost of \$850,000. The cars, the road said, are the first 70-ton flat cars it has ordered for service in Canada.

SPECIAL

REA Purchases 3,000 Trucks for \$9,500,000

The Railway Express Agency has ordered 3,000 new 1½-ton pickup and delivery trucks at a cost of \$9,500,000, it was announced by A. L. Hammell, REA president. The new units, many of which are expected to be put into service before the year-end in the District of Columbia and 65 other cities in 30 states, are being custom built to the agency's specifications.

Manufacturers supplying truck-chassis equipment are the Fargo Motor Division (Dodge) of the Chrysler Corporation; Ford Motor Company; General Motors Corporation; and the International Harvester Company. Specially designed truck bodies are being

CLERKS APPROVE CARRIER DEMAND

An unusual note in railroad labor relations came out of a recent meeting of general chairmen of the Brotherhood of Railway and Steamship Clerks in Chicago.

In the now-settled "non-ops" fringe benefits case, one of the counter-demands by the carriers was for a time limit for the handling of claims and grievances (*Railway Age*, April 5, page 8). Commenting on this demand, which the Presidential Emergency Board approved, the September 15 issue of "The Railway Clerk," official publication of the brotherhood, says:

"Despite the traditional opposition of unions to time limits on grievances, there seems to be good reason to hope that there may be some advantage in the new rule to the employees in speeding the settlement of grievances. And anything that contributes to speedier settlement of grievances on the railroads is much to be desired."

built by the Gerstenslager Company; York-Hoover Body Corporation; and the Metropolitan Body Corporation, subsidiary of International Harvester.

Supply Trade

C. Allen Koenig, former sales manager for the National Pneumatic Company, has been appointed special representative for the **Toyad Corporation**, manufacturer of Neoprene latex fire-resistant foam for use in passenger-car seats and for thermal- and sound-deadening insulation. Mr. Koenig has established headquarters in the New York area.

The Railroad Supply division of the **Warren Soap Manufacturing Company**, Boston, has appointed the **Carrier Supply Company**, of St. Louis, as representative in that area.

Aeroquip Corporation has appointed **Forrest F. Hinkley** as general manager of **Aero-Coupling Corporation**, Burbank, Cal., a subsidiary company. Mr. Hinkley was formerly director of subsidiary operations at Jackson, Mich.

George W. Casey, formerly superintendent of manufacturing operations for the **Lehon Company**, has joined the railway sales division of that firm at Chicago.

Frederick C. Johnson, for the past six years manager of the scale department of the New York branch house of **Fairbanks, Morse & Co.**, has been appointed manager of the branch to succeed **Tom W. Drennen**, who recently resigned because of ill health.

Herbert G. Mastin, assistant vice-president of the Eastern Railroad division of **Dearborn Chemical Company**, has retired.

Stratoflex, Inc., has opened a new factory branch in Los Angeles. The operation is headed by **A. B. Quinn**, district manager, and **W. L. Jones** is branch manager. Sales engineers for the Los Angeles area are **J. J. McGrody** and **R. G. Wood**.

Robert J. Whelan, formerly Chicago district sales manager of **True Temper Corporation's** Railway Appliances division, has been appointed to the newly created post of assistant sales manager of the division. Mr. Whelan will work out of the firm's general sales offices in Cleveland.

Edward F. Schermerhorn, manager of the Insulated Joint department of the **Rail Joint Company** since 1928, has retired after 56 years with



RICHARD T. COYNE, new assistant to president, **National Motor Bearing Company**, at Chicago, who will be concerned with marketing and servicing the company's products for railroads. Mr. Coyne was formerly vice-president of **Pressed Steel Car Company**.

the firm. Mr. Schermerhorn participated in the work that led to the fiber specifications of the AAR's Signal Section in 1923; served in a similar capacity in 1935 when the fiber specifications again were studied and revised, and contributed also to the 1952 revision of the specifications.

L. J. Brasher, formerly superintendent of motive power of the **Belt Railway Company** of Chicago, has been appointed superintendent of heavy equipment maintenance, railroad department of the **Ford Motor Company** at Dearborn, Mich.

J. A. Smith has been appointed sales representative of the track equipment department of **Pullman-Standard**.



GLENN A. STETSON, who has been appointed transportation sales and service representative in the greater Chicago area for **Sherwin-Williams Company**. Mr. Stetson, assistant to **R. H. Hill**, general manager of the firm's transportation sales division since 1950, succeeds **Harry M. Faber**, who has retired after 47 years of service with the company.

ard Car Manufacturing Company at Chicago, succeeding **R. C. Caldwell**, who recently resigned to become superintendent of work equipment of the Texas & Pacific. Named as sales and service representatives of the same department are **W. E. Porter**, **H. J. Dumich** and **Harry Peaker**.

C. H. Anderson, formerly with Armco Drainage & Metal Products, has been appointed general manager of **Stanley H. Smith & Co.**

A new company, **Batchelder, White & Associates**, located in the Railway Exchange building, 80 E. Jackson boulevard, Chicago, has been formed to merchandise railroad equipment and supplies.

The mechanical division of **Southern Electric, Inc.**, Hammond, Ind., has expanded its operation to include manufacture of steel pipe coils for steam generators on diesel locomotives.

OBITUARY

George J. Diver, retired vice-president of the **Morrison Railway Supply Corporation** at Chicago, died September 23 at Indianapolis, Ind.

Railway Officers

BIRMINGHAM SOUTHERN.—As reported in *Railway Age* September 13, **Claud D. Cotten, Jr.**, has been named president of this road at Fairfield, Ala., and **Hugh G. Glasgow** succeeds Mr. Cotten as vice-president. Mr. Cotten was born at Birmingham, Ala., and was graduated from Georgia Institute of Technology (B.S. in M.E. 1935).



Claud D. Cotten, Jr.

He began his service with the BS in 1936 as mechanical engineer. From 1940 to 1941 and from 1942 to 1946 Mr. Cotten saw service with the U.S.



UP's SALT LAKE CITY DIESEL SHOP nears completion—Started late in 1951, the Union Pacific's diesel repair shop at Salt Lake City is about 70% completed. It will be the road's main diesel repair shop, and will cost \$5,600,000. Standing in place of the old engine house for steam locomotives, the shop will be

used for maintenance of diesel and gas turbine-electric locomotives. The shop high-bay is 410 ft long by 162 ft wide, and the two side bays are respectively 220 ft by 102 ft, and 303 ft by 80 ft. Equipment will include, among other things, a 250-ton overhead crane and a 90-ton drop pit table.

Army, European theater, was awarded the Purple Heart and discharged with the rank of major. He became master mechanic of the BS in 1946, later being appointed assistant to vice-president, and in April 1952 was named vice-president. He is chairman of the Car Service Committee of the American Short Line Railroad Association and president of the Southern Short Line Railroad Conference.

Mr. Glasgow was born at Edgewater, Ala., and was graduated from Alabama Polytechnic Institute (B.S. in Bus. Admin. 1937). Except for service



Hugh G. Glasgow

with the U.S. Army from 1941 to 1946 (E.T.O., Bronze Star), Mr. Glasgow has been with the BS since 1937, serving as storekeeper, general storekeeper, and personnel and safety supervisor.

BURLINGTON.—**Charles J. Miller**, division superintendent at Galesburg, Ill., has been transferred

to Ottumwa, Iowa, succeeding **George W. Eckhardt**, who retired October 1 after more than 50 years of service. Mr. Miller's successor is **Jack E. Hamer**, assistant to general manager at Omaha, who in turn has been succeeded by **John W. Terrill**, assistant division superintendent at that point. **Earl D. Harville**, trainmaster at Aurora, Ill., replaces Mr. Terrill.

CHICAGO & NORTH WESTERN.—**H. A. Gundersen**, freight traffic manager at Chicago, has been advanced to assistant general traffic manager in charge of rates and divisions there. **Henry J. Schroeder**, assistant freight traffic manager—rates at that point, becomes assistant freight traffic manager—divisions. Named as assistant freight traffic managers—rates at Chicago are **I. O. Lawrenz**, general freight agent—rates; **W. R. Tueffel**, assistant general freight agent; and **E. G. Johnson, Jr.**, assistant general freight agent—rates. **W. L. Frank**, assistant general freight agent—rates, advances to general freight agent—divisions, while **A. C. Kruse**, chief clerk in the office of vice-president in charge of rates and divisions, and **P. W. Beutjer**, chief clerk in the office of freight traffic manager—rates, have been named assistant general freight agents—rates.

ERIE.—**Edwin W. Keiley**, assistant general eastern agent at New York, has been appointed assistant general freight agent at Detroit, succeeding **L. J. Marion**, whose retirement was noted in *Railway Age* September 6. **Earl C. Adler**, general agent at Los Angeles, succeeds Mr. Keiley at New York and is succeeded by **Wilbur W. Thoms**, division freight agent at Jamestown, N. Y. **Claude F. Lauer**, general agent at Cleveland, has been

transferred to Columbus, Ohio, succeeding **J. Lawrence Chapman**, who replaces Mr. Thoms. **Charles A. Parker** has been named general agent at Cleveland to succeed Mr. Lauer.

FRISCO.—**H. C. Bitner**, assistant superintendent at Tulsa, Okla., has been appointed superintendent terminals at that point, succeeding **E. M.**



H. C. Bitner

Gray, who becomes terminal trainmaster at Memphis, Tenn. to replace **R. P. Shoaf**, newly appointed as trainmaster at Tulsa.

GREAT NORTHERN.—**D. L. Manion**, trainmaster at Spokane, Wash., has been appointed staff assistant to the general manager—lines west at Seattle, Wash. Mr. Manion's successor is **H. H. Holmquist**, who transfers from Wenatchee, Wash. **T. G. Hooker**, assistant trainmaster at Vancouver, B.C., replaces Mr. Holmquist.

P. F. Connelly, assistant to general freight agent at Seattle, has been promoted to assistant general freight agent—rates and divisions there. **A. N. Tein**, commerce agent at St. Paul, advances to assistant general freight agent—commerce section.

N. A. Savage, general agent at Buffalo, N.Y., has been named assistant general freight agent—rates and divisions at St. Paul, Minn. **R. A. Cory**, traveling freight agent at Cincinnati, is Mr. Savage's successor.

Wilbert F. Arksey has been appointed engineer water service and fuel facilities at St. Paul, succeeding **B. W. DeGeer**, who has retired.

LEHIGH & NEW ENGLAND.—The purchasing department of this road and the Lehigh Coal & Navigation Co., **W. B. Joachim, Jr.**, purchasing agent, is now located at 528 North New street, Bethlehem, Pa. The department was formerly at 123 South Broad street, Philadelphia.

MILWAUKEE.—**Charles T. Lannon**, assistant treasurer at Chicago, has been elected treasurer at that point to succeed **Fred H. Jeffrey**, who retired August 31 after a half

century of railroad service. Mr. Lannon's successor is **James M. Hazelton**, transfer agent in the treasurer's office in that city.



Charles T. Lannon

M. A. Nyberg, supervisor telegraph and signals at Milwaukee; **J. T. Hanlon**, supervisor telegraph and signals at Perry, Iowa; and **R. R. McConahay**, signal and communication supervisor at Mobridge, S.D., have been named signal and communication supervisors at Seattle, Wash.; Milwaukee, Wis.; and Perry, Iowa, respectively. Mr. Nyberg succeeds **J. F. McConahay**, who recently retired.

W. J. Hotchkiss, division superintendent at Savanna, Ill., has been transferred to Austin, Minn., where he succeeds **M. T. Sevedge**, who moves to Spokane. Mr. Sevedge replaces **S. E. Herzog**, who becomes division superintendent at Butte, Mont., to succeed **J. T. Hayes**, who transfers to Savanna, Ill., to replace Mr. Hotchkiss.

Harold L. Pitner, assistant engineer at Chicago, retired September 30.

NEW HAVEN.—**Frank T. Richardson** and **Leslie H. Tyler** have been appointed resident public relations managers at New York and New Haven, respectively. Mr. Richardson was formerly director of public relations for ACF Industries at New York, and Mr. Tyler was assistant director of publicity of the New Haven at New Haven.

Henry T. Moorhead, assistant to general passenger traffic manager at Boston, has been promoted to assistant general passenger traffic manager. **Charles A. Goodwin**, manager of passenger station services at Boston, has been appointed assistant to general passenger traffic manager.

NORFOLK & WESTERN.—**W. A. Corman**, foreign freight agent at New York, has been named general foreign freight agent there, a new position. **C. N. Butler**, foreign freight agent at Chicago, has been appointed assistant general foreign freight agent at New York. **J. J. Evich**, assistant general foreign freight agent at Nor-

folk, has become foreign freight agent at Chicago, and his former position has been abolished. **Lt. Col. C. I. Britts**, assistant chief of transportation of the U. S. Marine Corps, has returned to the N&W as assistant foreign freight agent at Norfolk. **I. W. Begbie**, assistant foreign freight agent at New York, has retired at his own request after 32 years of service. The positions of foreign freight agent and assistant foreign freight agent at New York have been abolished.

W. E. Robertson, Jr., assistant to superintendent transportation at Roanoke, Va., has been appointed director of civil defense for the company.

NORTHERN PACIFIC.—**E. G. Lind** has been appointed to the newly created position of diesel supervisor at Livingston, Mont.

H. M. Sova, assistant signal engineer at St. Paul, has retired after more than 44 years of continuous service.

H. E. Nelson, division storekeeper at Glendive, Mont., has been named district storekeeper at Livingston, Mont., succeeding **L. D. Greeno**, who has retired. Mr. Nelson's successor is **R. F. Blakeslee**, storekeeper at Laurel, Mont.

W. L. Waleen, assistant signal engineer at St. Paul, Minn., has exchanged his duties for those of **H. M. Sova**, who retired September 1 as assistant signal engineer—eastern district at that point. Mr. Waleen has been replaced by **A. C. Eastman**, office engineer, who in turn has been succeeded by **C. H. Dunn**, general signal inspector.

Named as assistant general freight agent at St. Paul is **F. J. Kassekert**, chief of the rate analysis bureau there, who replaces **E. G. Anderson**, retired. **R. W. Bathen**, chief rate analyst, succeeds Mr. Kassekert.

SEABOARD.—**W. H. Higginbotham**, district freight agent at Raleigh, N.C., has been appointed assistant general freight agent there.

E. S. Laws, structural engineer at Norfolk, Va., has been appointed assistant division engineer at Raleigh, N. C.

E. W. Long, freight traffic manager at Norfolk, Va., has retired after more than 42 years of service.

SOUTHERN.—**Thomas D. Leavitt**, chief of tariff bureau at Atlanta, has been appointed assistant coal freight agent there, succeeding **Hugh L. Marston**, whose appointment as coal freight agent at Atlanta was announced in *Railway Age* August 2. **G. William Edler** has been named general industrial agent at Washington, D.C., succeeding **Ralph A. Jackson**, who has retired after more than 40 years of service. **Joel T. Ghesling, Jr.**, assistant general western freight agent at Chicago, has been promoted to general agent at Pittsburgh, succeeding Mr. Edler. **Willis T. Carpenter, Jr.**, district freight agent at Chicago,

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GALVESTON-BEAUMONT
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succeeds Mr. Ghesling as assistant general western freight agent there.

As reported in *Railway Age* September 6, **E. Macon Tolleson** has been appointed assistant vice-president at Washington, D.C. and **Frank S. Worthington** succeeds Mr. Tolleson



E. Macon Tolleson

as general superintendent transportation at Charlotte, N.C. Mr. Tolleson was born October 13, 1904, at Montgomery, Ala. and joined the Southern at Chattanooga in September 1919 as messenger. After serving in various

trainmaster, superintendent and general secretarial capacities, he became assistant trainmaster, terminal trainmaster,



Frank S. Worthington

trainmaster, superintendent and general superintendent transportation.

Robert G. Warner and **Willard V. Drischel, Jr.**, commercial agents at Chicago, have been appointed district freight agents.

UNION PACIFIC.—**Ernst G. Hayes** has been appointed general agent at Santa Ana, Cal.

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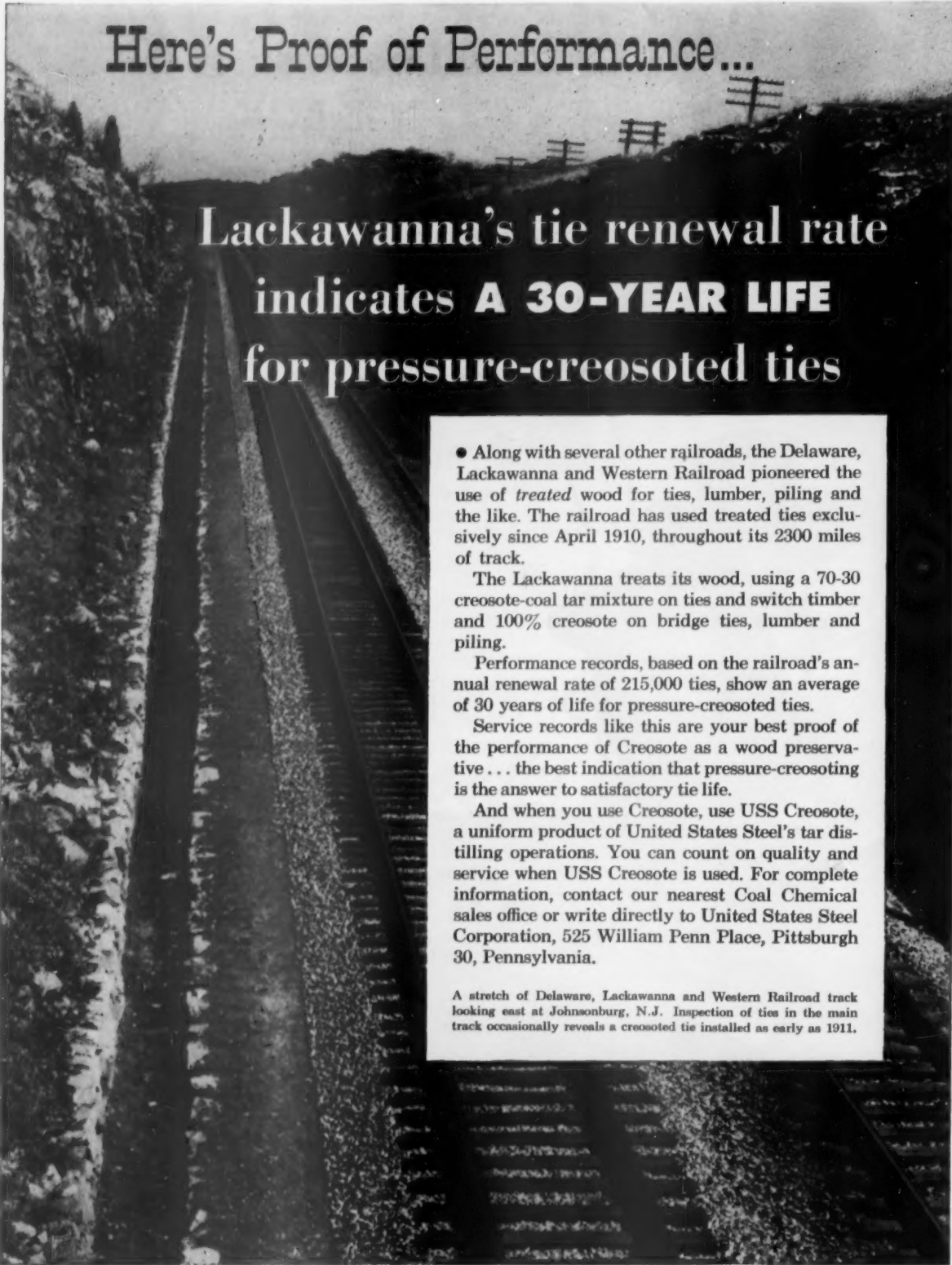
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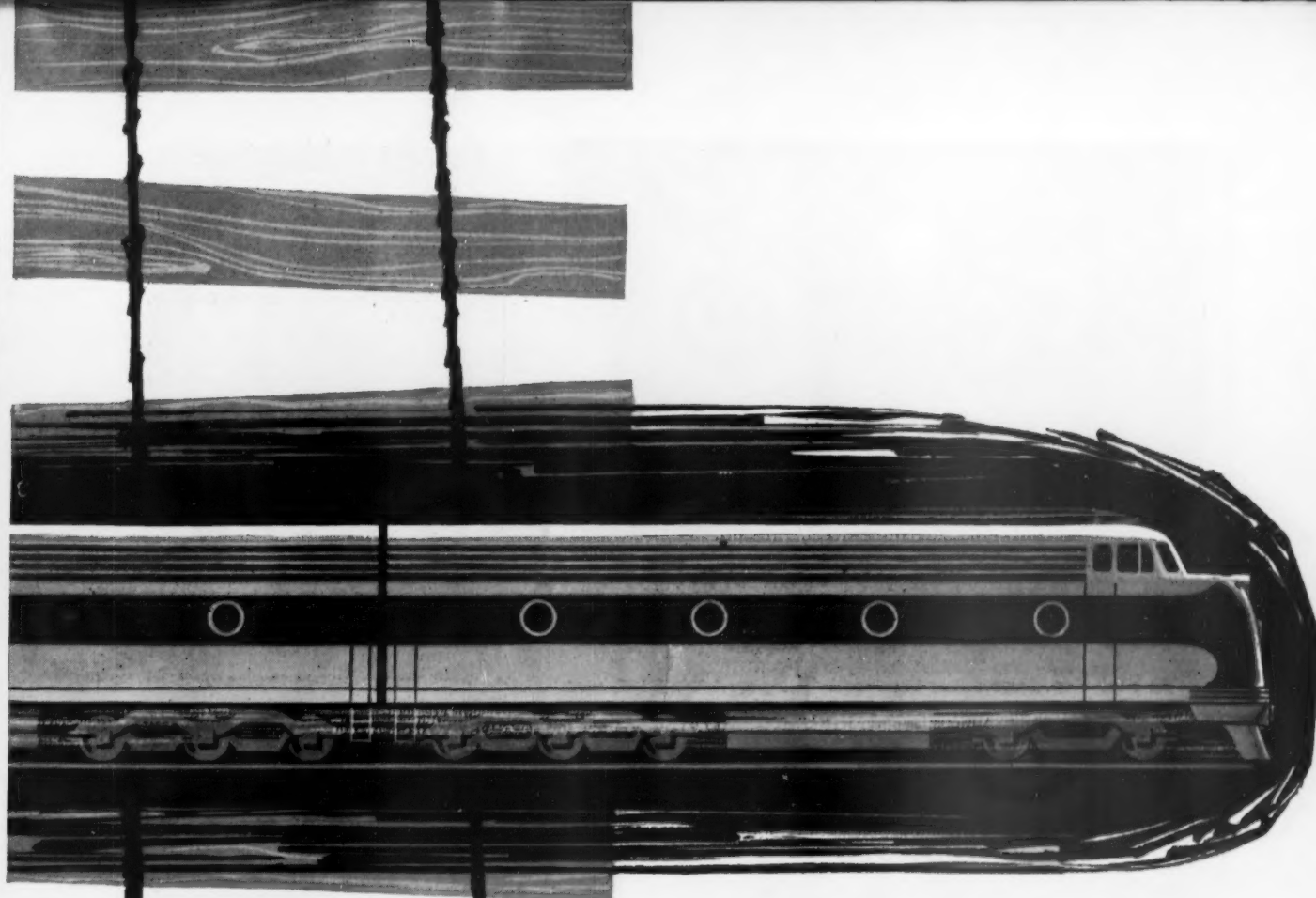
A stretch of Delaware, Lackawanna and Western Railroad track looking east at Johnsonburg, N.J. Inspection of ties in the main track occasionally reveals a creosoted tie installed as early as 1911.

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TRADE PUBLICATION

OKONITE CABLES FOR RAILROAD USE. 40 pages. Bulletin OK-1078, Okonite Company, Passaic, N. J.

This 40-page book lists service-proved insulated cable construction for signaling, communications, locomotive and car wiring, and portable applications. Complete dimensional data is included, in addition to a brief description of component parts and manufacturing techniques. The booklet has a general description of application and construction features of Okonite cables, and a section dealing with splicing materials, such as rubber tape, friction tape, and rubber cement.

FILM DIRECTORY

FREE LOAN 16-MM SOUND FILMS. Princeton Film Center, Inc. Princeton, N. J.

This new list covers a wide range of informative and entertaining motion pictures, many in color, which are suitable for clubs, colleges, and industrial and adult audiences.

PAMPHLETS

WHERE DID THEY HIT PAY DIRT? 32 pages, illustrations, maps. Central of Georgia, Industrial Development department, 501 Rhodes Haverly bldg., Atlanta 3, Ga. Free.

Answering the question posed in the title, this brochure fires the answer first thing: "Right here in the booming industrial southeast!" Many trademarks and photographs of famous industries are shown as proof that such firms "staked claims to new profits in the middle of multiple markets." Reasons for their location in the area are given, and eight choice industrial sites are described, accompanied by aerial photographs.

TRENDS AND CYCLES IN CAPITAL FORMATION BY UNITED STATES RAILROADS, 1870-1950, by Melville J. Ulmer. 70 pages, charts, tables. Occasional Paper 43, National Bureau of Economic Research, Inc., 261 Madison ave., New York 16. \$1.50.

U. S. railroads today produce six times as much output with the same amount of capital as they did in 1882. This is one of the new facts reported in this study—one of a series originating in the inquiry into long-term trends in capital formation and financing in the United States.

Dr. Ulmer's study shows that capital expansion in railroads occurred in cycles mirroring changing currents of business over the 80-year period studied, including even those business

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cycles noted for their mildness and brief duration. But in addition to these shorter fluctuations, Dr. Ulmer found that the record of railroad capital formation showed towering swings of an average duration of 17-20 years. These dramatic expansions uniformly began to turn down toward prolonged contraction at about the same time as major downturns in general business activity.

The study also shows that there has been a marked shift in sources of railroad financing over the past 80 years. Until World War I, almost all additions to assets were financed by sales of capital stock and bonds. By 1950,

external financing was insignificant, and expansion was being financed out of surplus and depreciation reserves. The sharp rise in the price of road and equipment also encouraged use of internal financing. Over the 80-year period, the cost of road and equipment more than tripled, while wholesale prices in general barely doubled.

BIBLIOGRAPHY OF RAILROAD LITERATURE.
56 pages. Association of American Railroads, Transportation bldg., Washington 6, D.C. Free.
A list of juvenile books, general rail-

road books, books on model railroad-ing, railroad statistics, railroad and travel periodicals, and company periodicals. Publishers' addresses are also listed.

COLLEGE COURSES IN RAILROAD SUBJECTS. 32 pages. Association of American Railroads, Transportation bldg., Washington 6, D.C. Free.

A list of colleges and universities offering courses in engineering, transportation, and traffic management, with special reference to the railroad field.

THE STORY OF NEW STREET, by F. W. Gracott. 16 pages, illustrations. British Railways (London Midland Region), 64 Cardington st., London, N.W.1. One shilling.

Issued to commemorate the centenary of the opening of Birmingham New Street Station, June 1, 1854.

THE THIRD WOODHEAD TUNNEL, by George Dow. 27 pages, illustrations, drawings. British Railways (London Midland Region), 64 Cardington st., London, N.W.1. One shilling, sixpence.

Issued to commemorate the formal opening of the new Woodhead tunnel, June 3, 1954. Begun in 1949, the new 3-mile tunnel runs under the Pennine range from Woodhead to Dunford Bridge on the main line between Manchester and Sheffield.

THE RAILROAD RAIL: RAW MATERIALS TO RIGHT OF WAY. 16 pages, illustrations. Booklet 372. Bethlehem Steel Company, Bethlehem, Pa. Free.

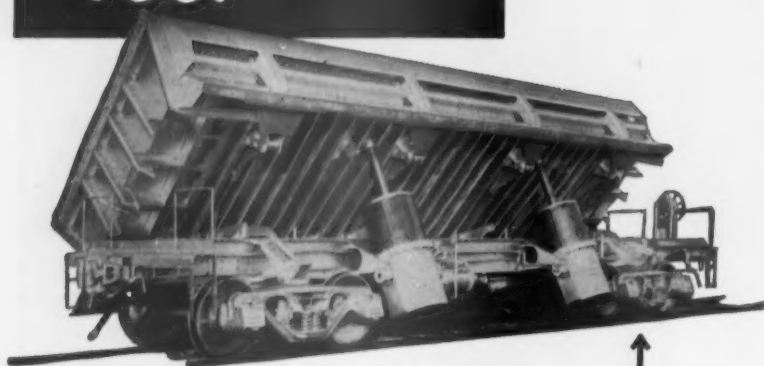
Shows various rail cross-sections since 1767 and explains how railroad rails evolved and how rails are manufactured.

ANNUALS

JOINT EQUIPMENT COMMITTEE [REPORT ON] COSTS OF RAILROAD EQUIPMENT AND MACHINERY, July 1, 1954. 21 pages. Association of American Railroads (Finance, Accounting, Taxation & Valuation Department), Transportation bldg., Washington 6, D.C. Free.

TABULATION OF STATISTICS PERTAINING TO SIGNALS, INTERLOCKING, AUTOMATIC TRAIN CONTROL, TELEGRAPH AND TELEPHONE FOR TRANSMISSION OF TRAIN ORDERS, SPRING SWITCHES, AND TRAIN COMMUNICATION SYSTEMS AS USED ON THE RAILROADS OF THE UNITED STATES, January 1, 1954, compiled by the Bureau of Safety, Interstate Commerce Commission. 29 pages. For sale by Government Printing Office, Washington 25, D.C. 25¢.

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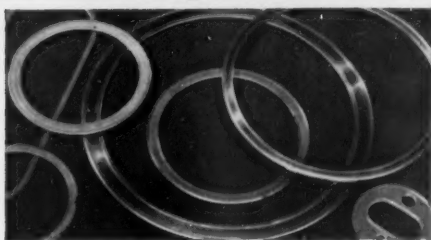
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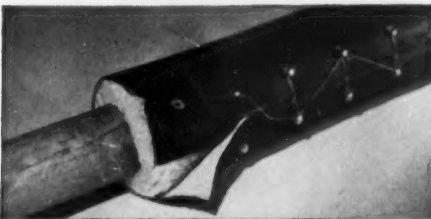
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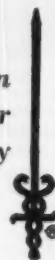
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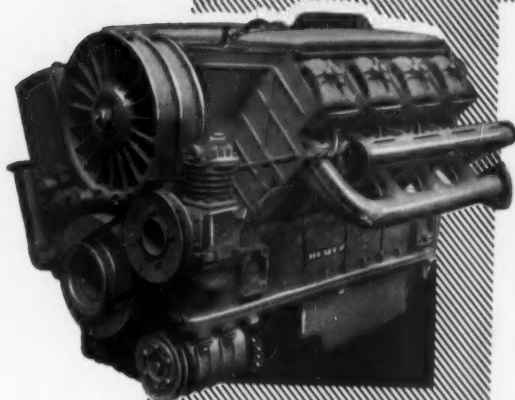
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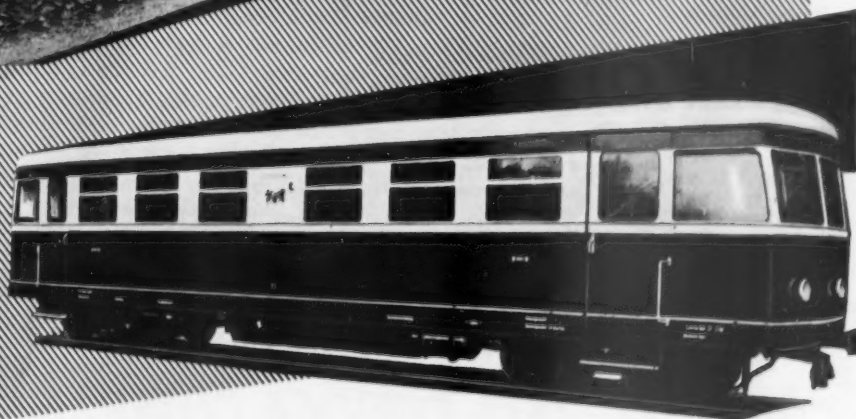
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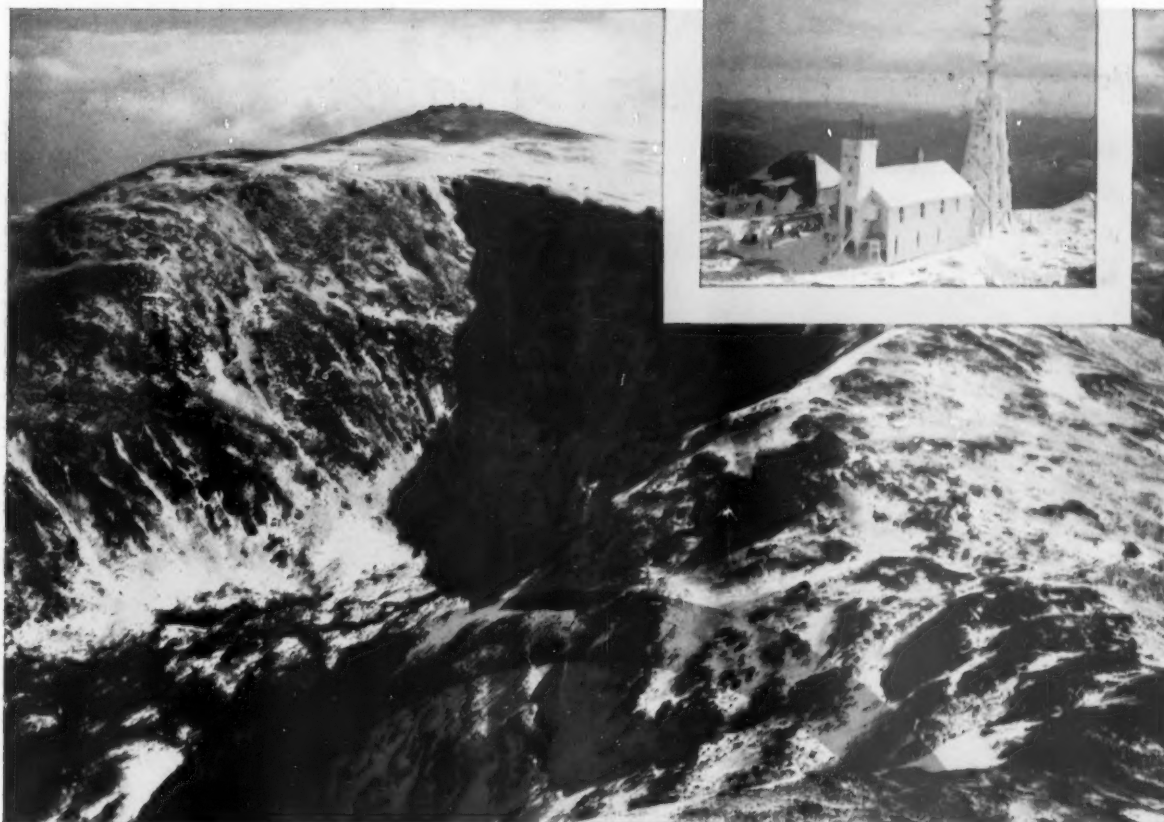
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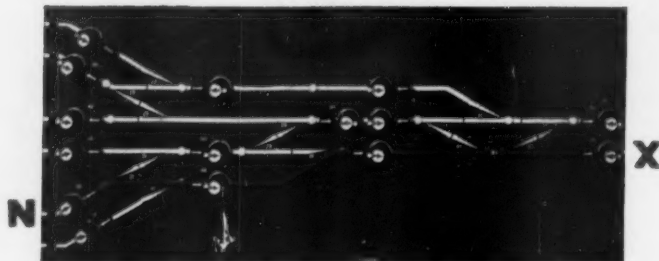
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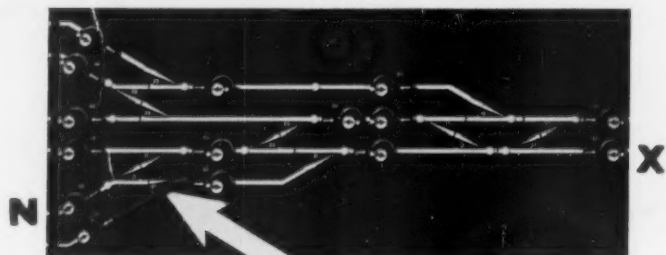
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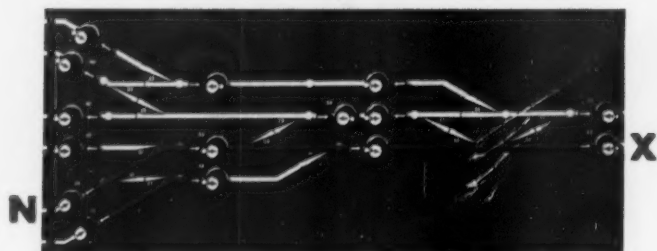
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